volume 48:number 3
2016 winter

ROM

MAGAZINE *of the* ROYAL ONTARIO MUSEUM

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Canada's Wildlife Photo Prodigy
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BIODIVERSITY DISCOVERIES IN SRI LANKA

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BRINGING THE GREAT AUK BACK TO LIFE

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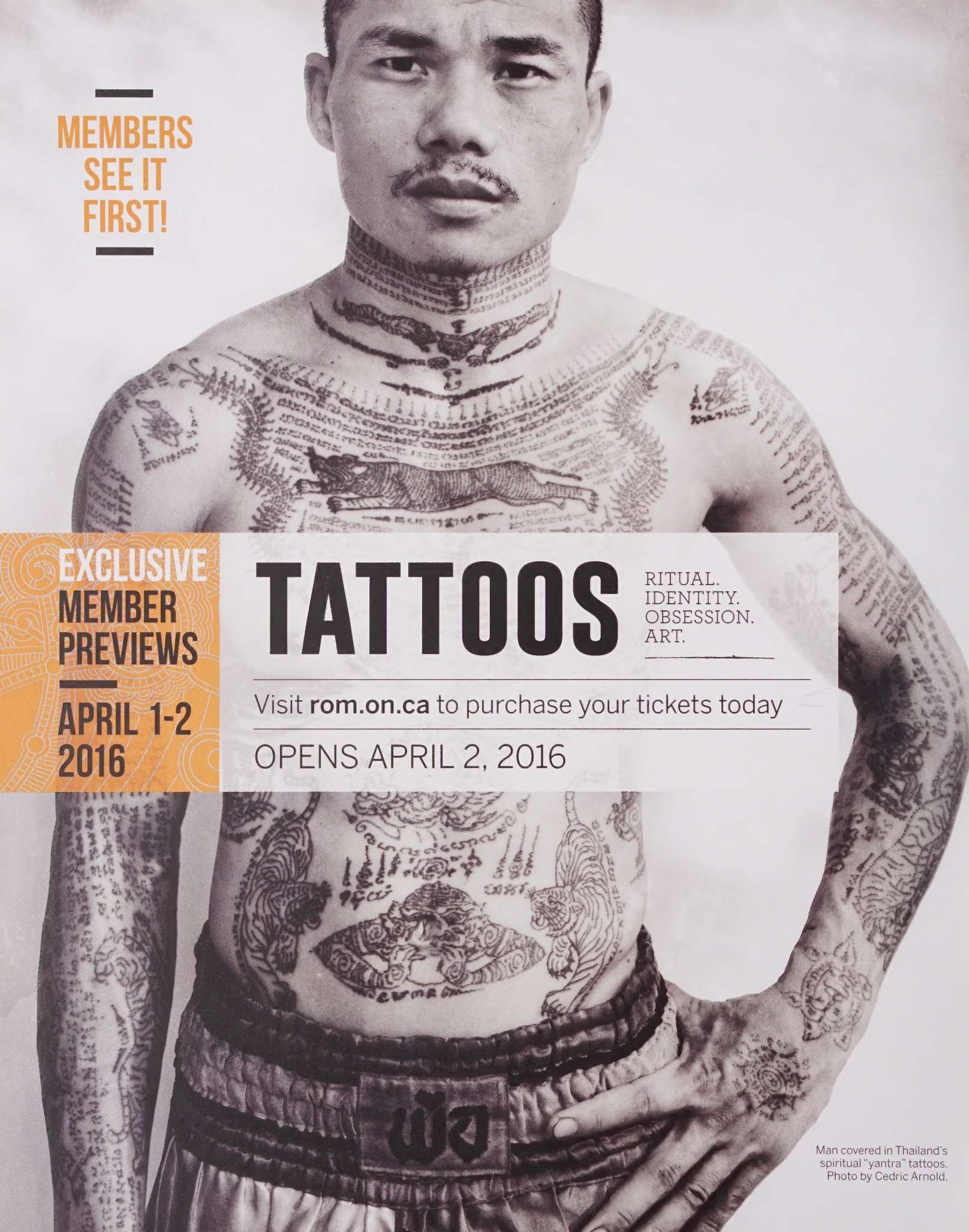
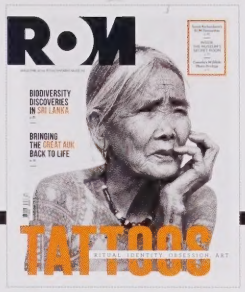
WINTER 2016
Display until March 19, 2016

TATTOOS

RITUAL. IDENTITY. OBSESSION. ART.



Man covered in Thailand's spiritual "yantra" tattoos. Photo by Cedric Arnold.



ON THE COVER
"The Last Tattooed Women in Kalinga." Jake Versoza. Philippines, 2012.

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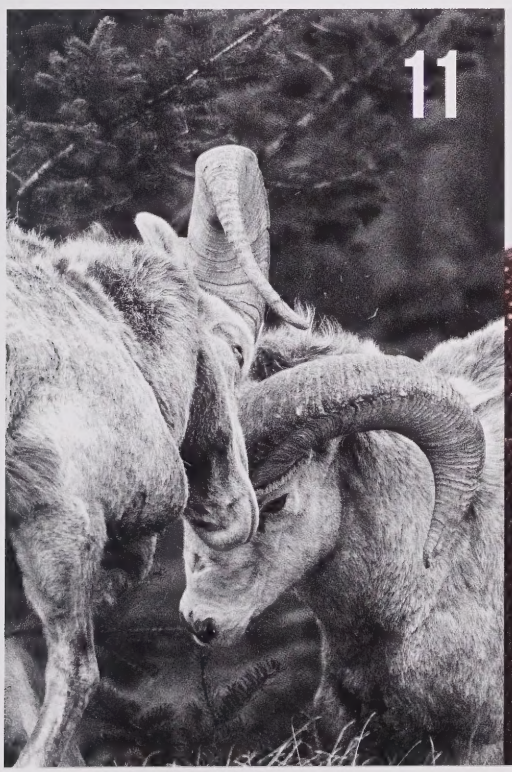

KRZYSZTOF GRZYMSKI

SENIOR CURATOR EGYPT & NUBIA

Krzysztof's work at the ROM encompass three different streams: field archaeology, museum curatorship, and university teaching. His field projects are carried out in Egypt and Sudanese Nubia. His curatorial activities include developing the Egyptian and Nubian galleries and curating special exhibitions.

OLIVER HADDRATH

ORNITHOLOGY TECHNICIAN

Oliver is responsible for the operations of one of the ROM's two genetic research labs, which uses DNA to examine genetics of rare and endangered species. He is currently completing his PhD, which involves developing new molecular markers to look back in time to the earliest evolutionary events surrounding the origin of birds.

TAYLOR MIATELLO

MARKETING COORDINATOR

Taylor has been at the ROM for three years. He has worked on campaigns for the *Wildlife Photographer of the Year* exhibition, the ROM Centennial, and, most recently, as the marketing lead on *Pompeii: In the Shadow of the Volcano.* Taylor's expertise and creativity will next be applied to the ROM's *Tattoos* exhibition.

EMILY RONDEL

RESEARCH ASSOCIATE

Emily has worked to engage the public in bird research ever since her Master's degree, which focused on citizen science's applications for bird conservation. She has six years of ornithological field research and outreach experience, and has developed and grown Bird Studies Canada's Toronto programs.

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Published four times a year by the Royal Ontario Museum through the generosity of the Louise Hawley Stone Charitable Trust.

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Indexed in the Canadian Periodical Index and the Canadian Magazine Index, and available online in the Canadian Business & Current Affairs Database ISSN 1911-947X and through Thomson Gale.

Canadian Publications Agreement #40068986.

Subscriptions and Single Copy Sales
Subscription cost (four issues) $20 including HST; outside Canada add $8 for postage and handling; single copies cost $5.95 plus HST. Circulation and subscription inquiries should be addressed to Julie Govan at julieg@rom.on.ca.

The ROM is an agency of the Government of Ontario.

ROM magazine is printed on paper from well-managed forests and is chlorine and acid free.

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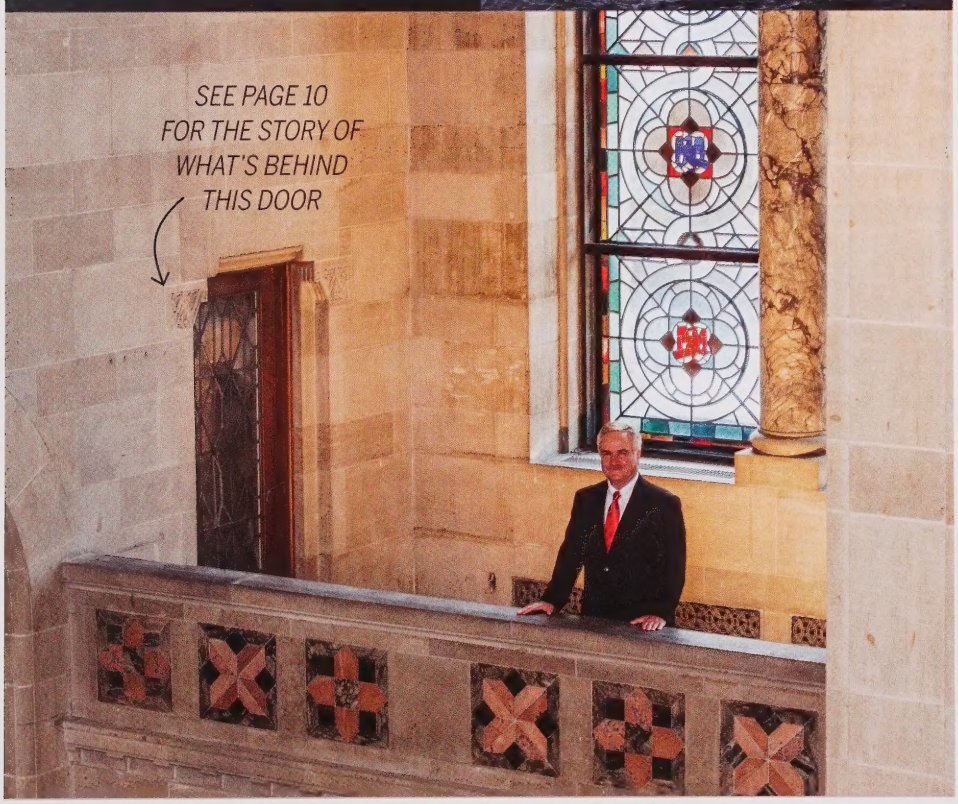


HIGHLIGHTS OF 2015

Celebrating award-winning exhibitions and research at the ROM

As I walk through the Museum each day, I am reminded of the magical feeling museums give us — I see visitors of all ages enjoying our collections, exhibitions, and special events like our ROM Speaks lectures and Friday Night Live, which bring the wonders of the Museum to new audiences.

During the holiday season, I know many of you may have a little more time available, which is a great thing because there's never been a more exciting time to join us at the Museum!

We've been home to a great number of incredible events over the last year. My own highlights include fascinating exhibitions like ***Pompeii: In the Shadow of the Volcano***, ***¡Viva Mexico!***, Douglas Coupland's ***everywhere is anywhere is anything is everything***, the award-winning ***Fashion Follows Form: Designs for Sitting*** exhibition, as well as research-focused outreach projects like the **Blue Whale** project that saw us send a team (myself included) to help recover the carcass of a Blue Whale for future installation at the Museum.

I know the exceptional experiences and programs we offer at the ROM introduce visitors to the joy of lifelong learning and I'm particularly proud of this role the ROM plays in inspiring the next generations of scientists, world leaders, and curiosity seekers.

I hope you enjoy this issue of ROM magazine, and visit in person at the Museum soon—a world of wonder and discovery awaits you.

Mark D. Engstrom

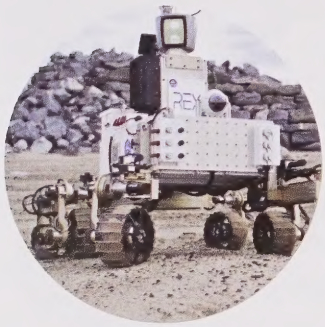
MARK ENGSTROM
INTERIM DIRECTOR AND CEO

member news

calendar / special events / discount offers / meet a member

ON NOW/LAST CHANCE

BIG WEEKEND
ROM for the Holidays:
Escape to Planet ROM
December 26 to January 3



POMPEII
In The Shadow Of The Volcano
Closes January 3

¡VIVA MEXICO! CLOTHING AND CULTURE
Presented by The Mexico Tourism Board, this textile exhibition showcases thousands of years of civilization and a fusion of indigenous and colonial histories with the living traditions of twenty-first century Mexico.
On until May 23

JANUARY

DINOS IN THE DARK (ADULT SLEEPOVER)
January 15

Exclusive for Patrons

YOUNG PATRONS VAULT TOUR
Explore the ROM's curatorial centre with an in-depth look at one of our collection areas with a ROM expert.
January 20

UNDER THE SEA: CELEBRATING PHOTOGRAPHY BENEATH THE WAVES
A lecture by acclaimed *National Geographic* photographer and WPY 2015 winner David Doubilet and marine biologist Jennifer Hayes.
January 26 at 7:00PM

SLEEPOVER
The ultimate backstage pass at the ROM. Enjoy exclusive, after-hours access to the galleries, meet ROM experts and touch artifacts from our vaults, and bunk down for a sleepover under the dinosaurs, knights, and mummies of the Museum.
January 29

FEBRUARY

KITCHEN CONVERSATIONS
C5 RESTAURANT
February 5 at 6:00PM

LUNAR NEW YEAR
Celebrate the New Year at the ROM on Family Day weekend.
February 13 to 15

SLEEPOVER
The ultimate backstage pass at the ROM. Enjoy exclusive, after-hours access to the galleries, meet ROM experts and touch artifacts from our vaults, and bunk down for a sleepover under the dinosaurs, knights, and mummies of the Museum.
February 19

Exclusive for Patrons

ROYAL PATRONS BEHIND-THE-SCENES TOUR
Explore the ROM's curatorial centre with an in-depth look at two of our collections areas with ROM experts.
February 24

Exclusive for Patrons

YOUNG PATRONS PRIVATE COLLECTION TOUR
Annually, YPC visits private individual or corporate collections in Toronto and abroad. For additional details, visit **rom.on.ca/ypc**.

MARCH

MARCH BREAK
March 12 to 20

SLEEPOVER
The ultimate backstage pass at the ROM. Enjoy exclusive, after-hours access to the galleries, meet ROM experts and touch artifacts from our vaults, and bunk down for a sleepover under the dinosaurs, knights, and mummies of the Museum.
March 4

TATTOOS OPENING PARTY
Explore the multifaceted world of tattooing and its 5,000-year-old history at this exclusive exhibition preview.
March 30

FIND OUT MORE

For more information on upcoming events, visit **rom.on.ca/whatson**

416.586.5797

Planet ROM photo courtesy of Canadian Space Agency.

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1 yr $626

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$600+

ROYAL PATRONS CIRCLE (RPC)
$1,800+

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A perfect gift for the holidays!

Share your love of the ROM with family and friends this holiday season by giving them a ROM Membership. Along with unlimited free admission to ROM galleries and exhibitions, they will enjoy an array of exclusive benefits all year long. Free *Pompeii* exhibition guide with each purchase!

MEMBERS: GIVE UNLIMITED ROM AND SAVE* $20

*ROM Members save up to $20 on select gift membership levels. Purchase gift memberships online at **rom.on.ca/members** or call **416.586.5700**. Use promo code MEMGIFT to save. Offer expires December 31, 2015.

ROM MEMBERS GET FREE ADMISSION THIS FEBRUARY

AGA KHAN MUSEUM
February
13 & 14

THE MUSEUM
February
20 & 21
April 23 & 24

BATA SHOE MUSEUM
February
27 & 28

SPECIAL RECIPROCAL OFFERS*

FREE ADMISSION TO SIX CANADIAN MUSEUMS AND ART GALLERIES
Enjoy free general admission all year long to Art Gallery of Nova Scotia, Glenbow Museum, Kamloops Art Gallery, McCord Museum of Canadian History, Montreal Museum of Fine Arts, and Vancouver Art Gallery.

SPECIAL GARDINER MUSEUM DISCOUNTS
ROM Members enjoy 25% off admission to the Gardiner Museum and 10% off at the Gardiner Bistro.

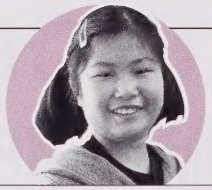
ROYAL BC MUSEUM
ROM Members receive a 20% discount on daily admission rates to Royal British Columbia Museum.

*OFFER EXCLUDES FAMILY ADMISSION RATE. VALID ROM MEMBERSHIP CARD MUST BE SHOWN AT THE TIME OF PURCHASE.

ELECTION NEWS

The Royal Ontario Museum Act provides for the election of three Members of the ROM to the Board of Trustees to hold office for a term of three years each. One of these positions will become vacant June 30, 2016.

The incumbent, Nita Reed, has served one three-year term as a membership-elected trustee and is eligible to stand for a second three-year term. The vacant term of office would be July 1, 2016 to June 30, 2019. Nominations for this position supported by the signatures of 25 active ROM members (please include membership number) should be forwarded to reach the Office of the Board Secretary by the close of nominations at noon on Friday, April 8, 2016. If you are interested in pursuing a membership-elected Trustee position on the ROM Board of Trustees please call the ROM Board Office at 416-586-5886 for more details.



MEMBER PROFILE

VISIT THE ROM FOR

MARCH BREAK events!

An Outstanding Explorer

TEN-YEAR-OLD **KRISTEN DING** LOVES THE FREEDOM OF HER ROM MEMBERSHIP

Kristen Ding (below with her parents) spends a lot of her free time at the ROM, and she enjoys the special events, like scavenger hunts and Earth Ranger shows.

THE BIODIVERSITY SECTION IS THE PLACE I ALWAYS VISIT

How often do you visit the ROM?
I try to visit the ROM once a week.

If you could bring one person to visit the ROM with you, who would it be?
I would like to bring a Lego designer with me. With ROM's great collections of dinosaur skeletons and animal specimens, I am sure there will be a lot of new Lego designs to bring excitement to kids like me.

What word can be used to describe your experience at the ROM?
"Enlightening" would be the first word jumping out of my mind. For the past three years, my parents and I have frequently visited the dinosaur gallery, biodiversity area, and rocks and minerals section, which help me build a strong vocabulary in these fields. It's always a lot of fun to link what I learned at the Museum with family vacations, including the green sea turtle farm, the white sand dollars, the sea stars, and the rays from the Caribbean islands.

What do you consider the greatest benefit to your ROM Membership?
The freedom to visit the ROM any time suiting our schedule, and it's always a lot of fun and I always find surprises. I enjoy the scavenger hunts and Earth Ranger shows very much. The petting of the snakes, the falcons, the owls, and the walking sticks gave me a lot of thrills.

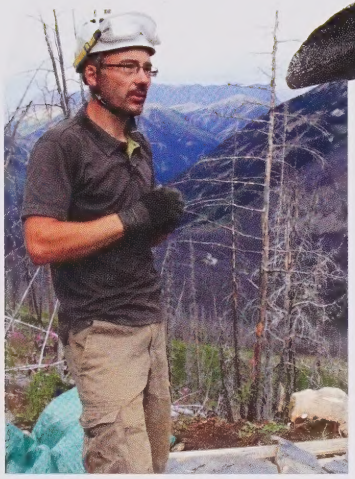
Are there specific places in the Museum you find yourself coming back to visit?
The biodiversity section is the place I always visit. Thanks to the staff and volunteers, there has been a lot of showing of animal specimens and skeletons about which I can ask all kinds of wild questions and get answers. Plus I get a cool stamp there on my passport for each visit.

How would you describe the ROM to a friend who had never visited before?
The ROM is a place that has a lot to offer. While kids like me would be so impressed by the dinosaurs/animals, other sections could inspire some great family vacation ideas—I got to see the Leaning Tower of Pisa this summer after my parents' many visits to the European sections on the third floor.

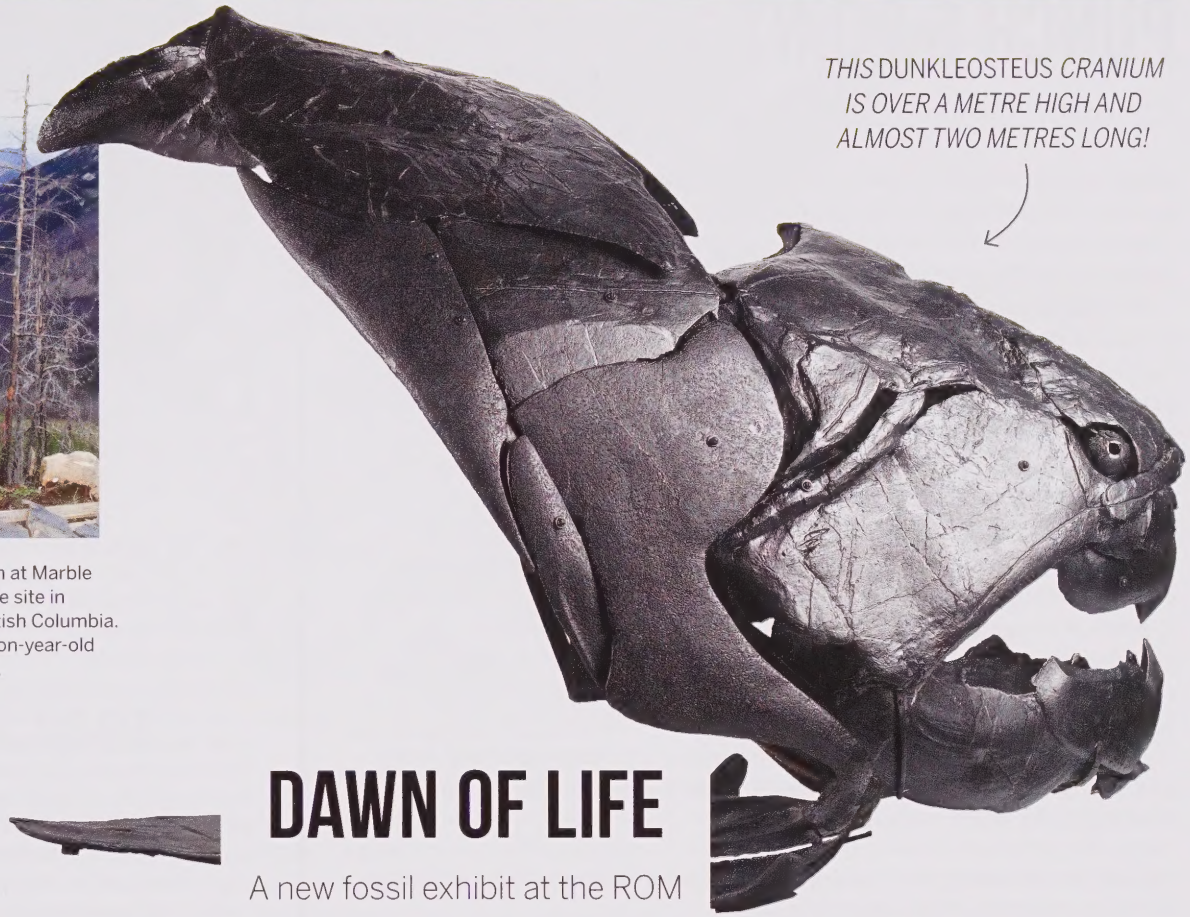
Do you have a favourite object in the Museum?
The axolotl is a charming animal that always amazes me. It looks so cute yet, at the same time, it is so tough that it can regrow chopped-off body parts. It would be so nice to watch it from all angles, or even better, to pet it a little bit.

You're very active with the Explorers' Club. What's your favourite part of being a member of the Explorers' Club?
My favourite part is definitely the 'behind-the-scenes' tour. The ROM has an amazing collection of animals and Burton the bat curator made the tour a treasure-hunt expedition.

If you were to plan a perfect day out with your family, what would you plan to do before and after your time spent at the ROM?
I would like to spend some time along Philosophers' Walk on our way to the ROM. It is a very peaceful place to enjoy the robins jumping, the willows swaying, the mulberry ripening, and the chestnuts dropping. On our way back from the ROM, I would walk through Queen's Park. It is a perfect place to learn to bicycle, play catch, or watch dogs chasing squirrels. ■



TOP: Dr. Jean-Bernard Caron at Marble Canyon, a new Burgess Shale site in Kootenay National Park, British Columbia. RIGHT: Cast of the 360 million-year-old armoured fish *Dunkleosteus*.



THIS DUNKLEOSTEUS *CRANIUM IS OVER A METRE HIGH AND ALMOST TWO METRES LONG!*

DAWN OF LIFE

A new fossil exhibit at the ROM

Fossils. The word tends to evoke images of dinosaurs or woolly mammoths, but life on Earth began billions of years before *T. rex*. For hundreds of millions of years, other even more fantastical creatures filled the oceans, land, and air. In fact, 99.9% of all species that ever lived on Earth are now extinct.

A new temporary exhibit provides just a taste of the "dawn of life"—a period starting with the first traces of life on Earth up to the origin of dinosaurs and mammals 200 million years ago. Featuring fossils from right across Canada (including our own Toronto backyard) and around the world, this exhibit at the ROM is a preview for the permanent and much larger Dawn of Life Gallery slated to occupy a 10,000 square foot space on the 2nd floor.

"We have gathered amazing fossils spanning the entire dawn of life, including the world's greatest collection of Burgess Shale animals, and it is time for the best of these to be brought out of the backrooms of the ROM," says Jean-Bernard Caron, Curator of Invertebrate Palaeontology. Dr. Caron is one of the foremost experts on the animals of the Burgess Shale. Dating to 508 million years ago, these fossils are exquisitely-preserved examples of the explosion of animal life that took place in the Cambrian seas.

From a spiky undersea worm with legs from the Burgess Shale appropriately called *Hallucigenia*, to an ancient armoured fish larger than a great white shark, the preview exhibit allows Museum visitors to see these and other exceptional fossils firsthand. The exhibit brings the past to life, integrating the multimedia approach that will be developed fully in the permanent gallery. From immersive and interactive displays to the use of 3-D visualization and printing, the Dawn of Life Gallery will combine the latest technology with spectacular fossils from this dynamic and crucial period in Earth history. As Jean-Bernard iterates, "This gallery is not only going to be unique to the ROM, but to the rest of Canada, and in fact the world. It is a story that only the ROM can tell, and you can help this vision become a reality."

DR. LINDA TSUJI is Contract Assistant Curator of the Dawn of Life Gallery.

BE A PART OF THIS STORY!

You can help bring this ground-breaking gallery to life, nurturing discovery and inspiring wonder for generations to come. To make a donation, visit **rom.on.ca/dawnoflife** or call **416.586.5660**.

ON DISPLAY

PUNCH & POINT

Canadian Editorial Cartoons in the ROM's Collection.

Witty, cutting, often provocative, and at times even poignant, editorial cartoons are anything but neutral. Taking their cue from current buzz, cartoonists distil a newsworthy event, concept, or attitude into a single image of powerful commentary.

We usually encounter editorial cartoons in their finished state, published in mass media with titles and captions. The ROM's collection of editorial cartoons, however, features original drawings prepared for transfer to the print medium. The collection to date comprises mostly late 19th- and early 20th-century works by John Wilson Bengough (1851–1923) and Sam Hunter (1858–1939), both of whom drew for Toronto newspapers such as *The Globe*, *The World*, *The Star*, and in the case of Bengough, *Grip* magazine. The Bengough cartoons were the gift of Charles Trick Currelly (1914); those by Hunter were the gift of the Toronto Star (1929) and the estate of Hunter's daughter, Margaret Ferguson (1983).

Some of Bengough's drawings feature on the verso preliminary sketches, thus revealing his concept development. Some of Hunter's drawings evidence erasures and ink enhancement in order to work the image "just so" for publication.

Punch & Point: Historical Editorial Cartoons of J.W. Bengough (1851-1923) and Sam Hunter (1858–1939) features 26 of the 245 Bengough and Hunter cartoons in the ROM's collection.

DR. ARLENE GEHMACHER is the Curator for Canadian Paintings, Prints & Drawings in the Department of World Cultures at the ROM.

WE SHIPPED 10 METRIC TONS OF ORES AND MINERALS!

A NEW HOME FOR THE MINERALOGY COLLECTION

After five years of planning, fundraising, moving our 75,000 mineral specimens into temporary storage, and packing and shipping a 10-tonne collection of ores and minerals from Bangkok to Toronto (whew!), the ROM Mineralogy collection is finally going to get a new home.

Largely as the result of the acquisition of the more than 20,000-piece Kirwin collection (the 10 tonnes mentioned above), the Earth Sciences Centre needed an upgrade in its storage capacity. We are doing away with our old wooden cabinets, since they aren't up to modern standards for long-term curation, and installing a new, all-metal, compact storage system. These cabinets will securely house our specimens and give us sufficient room for growth for decades to come.

A sampling of the material from the Kirwin collection is on display in the Teck Suite of Galleries: Earth's Treasures, so be sure to check out this exhibit on your next visit to the Museum.

IAN NICKLIN works with rocks, minerals, and meteorites in the ROM's Centre of Earth and Space.

The Kirwin Collection initiative is generously supported by BMO Financial Group, Yamana Gold Inc., Douglas Kirwin, Louise Hawley Stone Charitable Trust, Hatch, Rock of Ages Gala 2011, The Bogden Family, Scott and Ellen Hand, Francine and Robert Ruggles, Prospectors & Developers Association of Canada, Christopher Wansbrough, AMC Consultants, and Women in Mining Toronto.

Left: Bengough, *A Touching Appeal*, 1874; for *Grip*, April 18; pen & ink, touches of conté, over pencil; gift of Charles Trick Currelly; ROM 914x53.43. Right: Hunter, *Where They Stand On The Tariff Question*, 1896; for *The Toronto World*, June 4; pen & ink, with erasures; gift of the Estate of Mrs. Margaret Ferguson; ROM 983.133.81.

READERS' CHOICE 2015 NOW REST OF TO.

WE'RE TORONTO'S FAVOURITE MUSEUM!

The results from NOW Magazine's annual **Reader's Choice Awards** are in! We are very proud to announce that the Royal Ontario Museum has been selected by NOW readers as the winner of the 2015 award for Toronto's Best Museum!

This Ming Dynasty ewer was made during the first half of the 17th century in Jingdezhen, Jiangxi province, China. The porcelain is painted in underglaze cobalt blue and overglaze enamels in the wucai technique.

HEIGHT: 14 CM
WIDTH: 19 CM

NEW ACQUISITIONS

Ming Ewer

Thanks to the generous support of the Louise Hawley Stone Charitable Trust, the Museum recently purchased an exceptional mid-17th-century Chinese porcelain wine ewer in the wucai technique.

Wucai, which means "five colours," refers to the number five, which is a major number in Chinese cosmology. It also pertains to the five colours of the four directions, with the centre signifying completeness. Wucai technique was used to describe all porcelain with decoration in enamel colours and underglaze blue, often outlined in black or red.

The ROM's collection of Chinese ceramic vessels is comprehensive to the end of the Qing Dynasty (1911), containing wares from the Neolithic to the 20th century; however, there was a need in the area of fine porcelains of the Ming Dynasty. The purchase of this artifact fills in some gaps in the ROM's Chinese ceramic collection. A superb example of wucai ware, this wine ewer illustrates both the artistic refinement and technological achievement of the private kilns at Jingdezhen, considered the "capital of porcelain" in China during the 17th century. At this time, craftsmen working at private kilns in Jingdezhen were able to display their own unique style of painting based on their personal interpretation of traditional motifs, making the ceramic vessels lively and innovative.

During the late Ming dynasty, ceramic orders from the court began to diminish and private kilns started producing porcelain for the huge domestic and ever-increasing export markets. Jingdezhen porcelain does, however, fall into two distinct groups: the Imperial court orders, and production for domestic and export markets. Because Imperial ware was made to strict specifications, personal artistic expression by decorators was not allowed. Imperial porcelain appears artistically restrictive, but remains celebrated for its technical qualities. Artists producing non-Imperial work, working in private kilns, were allowed to create whatever shape and decorative styles were in fashion at the time and could target foreign buyers.

The vibrant colours of this porcelain wine ewer were created with overglaze enamels and underglaze cobalt blue, which require accurate controls of both the firing temperature and the exact amount of oxygen in the atmosphere. The elegant shape, including the body, spout, and handle, are inspired by bamboo stems. The depiction of zany birds and flowers attests to the artist's masterful command of brushwork. All these features are typical of mid-17th-century ceramic art, as the Imperial kilns declined and talented artists were free to create shapes and decorative motifs according to their own tastes and market demand.

This ewer is particularly rare. An almost identical piece is in the collection of the Percival David Foundation, now housed in the British Museum. Another similar piece with green glaze is in Sir Michael Butler's collection in England. Considering its superb artistic quality and extreme rarity, this new acquisition is an important addition to the ROM's collection of Chinese ceramics. ◘

GWEN ADAMS is a Technician (Asian Collections) in the Department of World Cultures at the ROM.

THE DIRECTOR'S OFFICE

Above the Rotunda, at the top of a closed-off staircase, the original Director's office has been sealed shut for decades.

HASN'T BEEN OPENED IN TWENTY YEARS!

Where is it?
Located on the second floor, at the north-east end of the Rotunda, this door leads to the original Director's office. Looking up from the floor of the Rotunda, you can see the door at one end of the mezzanine above the Weston Entrance. At the other end of the mezzanine is a similar door leading to the office of the Director's secretary.

Why was it closed?
The Director's office was located above the main entrance, so the Director could stay closely connected to visitors coming in the door below. As the Museum grew, the management eventually outgrew these two small offices.

Where is the Director's office now?
The office of the Director is now located at the southern end of the Weston Family Wing in the original 1933 building. What remains in the abandoned office today is still a mystery.

The Director's office had just undergone a mid-century modern update, captured in this archival photo. The space was last occupied by Dr. Peter Swann, the ROM's Director from 1966–1972.

1ST PLACE
2015 INTERNATIONAL
WINNER
WILDLIFE PHOTOGRAPHER OF THE YEAR

A TALE OF TWO FOXES
Wapusk National Park, at Cape Churchill, November 2014. Red foxes don't actively hunt Arctic foxes, but where the ranges of two predators overlap, there can be conflict.

CANADIAN WILDLIFE PHOTOGRAPHERS

PHOTOGRAPHER OF THE YEAR

Canada's Don Gutoski is 2015's top prize winner!

The compelling photograph of a red fox carrying a limp, white Arctic fox in its mouth has earned Canadian photographer Don Gutoski the title of Wildlife Photographer of the Year. Gutoski, who is an emergency doctor and amateur photographer from London, Ontario, took the image, titled "a tale of two foxes." Gutoski's picture beat 40,000 other entries to win the international competition. Here's the story behind the amazing photo.

Gutoski was in Wapusk National Park, at Cape Churchill, Manitoba, one day last November when he came upon a red fox. From a distance, Gutoski could see that the red fox was chasing something across the snow. As he got closer, he realized the prey, now dead, was an Arctic fox. For three hours in temperatures of -30°C he stayed at the scene, until the red fox, finally sated, picked up the eviscerated carcass and dragged it away to store for later.

We had some questions of our own for Gutoski.

Are you a professional photographer or is this a hobby? What motivated you to start doing wildlife photography?
I am an amateur photographer, but I love wildlife and I've been doing nature photography for over 40 years—ever since I took a course in high school in Kitchener. As my wife says, our vacations are all "fur and feather" trips.

What was one of your most challenging moments while taking a nature photograph?
I tend to look at each event not as challenging, but as fun. It is my hobby. Sometimes the biggest challenge is just getting to the locations. I've shot in some harsh conditions, from 50°C in India to -40°C in Churchill.

What advice would you give to beginning wildlife photographers?
This is a fantastic hobby. It can take you to incredible places to see fantastic creatures, or it can be done in your hometown. And it can be a life-long endeavour. My advice is to buy the best lens you can afford, learn how to use your equipment, study your subjects, and then be patient. Special photos come not only from great subjects but also great thinking and planning. And get on wildlife forums or websites to see what other people are doing and how they are doing it.

Anything else you'd like to tell us about your nature photography or your *Wildlife Photographer of the Year* adventure?
The WPY is a huge worldwide event. The amount of coverage and exposure I've received has been way beyond what I ever expected. This is an incredible show of talent, and anyone with an interest in wildlife or photography should not miss seeing this collection of images. It has been a thrill and an honour to be involved in this event.

SEE IT NOW

OVER 100 NEW AND SPECTACULAR PHOTOS!

The *Wildlife Photographer of the Year* exhibition is on until March 20, 2016. For more details, visit **rom.on.ca/wpy**.

Presenting Sponsor
Quark Expeditions®

The Next Generation

THIS YOUNG PHOTOGRAPHER IS AN ASPIRING PRO AND A WPY FINALIST!

JOSIAH LAUNSTEIN

AGE 10

Home
PINCHER CREEK, ALBERTA

Career Goal
WILDLIFE PHOTOGRAPHER

Alternate Career
HOCKEY PLAYER FOR THE CALGARY FLAMES

What advice would you give to aspiring amateur photographers who are just starting out?
One thing I've learned from my father is to photograph what you love, because it shows in your pictures. I love wildlife and especially Rocky Mountain Bighorn Sheep, owls, elk, and foxes. Those are the subjects I most love to photograph and I think I end up taking my best pictures of them. Also, get out as much as you can with your camera! I have also learned how important it is to learn how to use your camera and how you get a good exposure and what settings you need for different types of pictures. When I was seven and I was just starting to take pictures, I asked my dad if we could go photograph some eagles he knew had a nest near our home. I got some really cool pictures, but my very favourite one wasn't quite perfect because the eagle was suddenly going faster than my shutter speed could freeze. I decided I wanted to learn how to get that kind of picture to turn out perfectly.

Do you photograph other subjects than wildlife?
I'm focused on wildlife, but sometimes the mountains or sunset or other things in nature just look too cool to not photograph! I also take pictures of the big windmills around our home near Pincher Creek. I also take pictures of dogs with my dad, and assist him when he photographs working and hunting dogs.

What advice has your sister given you about nature photography?
We love taking pictures of wildlife together, but we can get a little competitive. I was seeing all the great pictures she was getting of wildlife and that made me want to start photographing animals too. When we are in the field together, I will sometimes ask her questions, or she will mention a new technique I should try.

Can you tell us a little bit about your favourite camera?
My dad, my sister, and I all use Nikon cameras and lenses. I use a camera that has a crop sensor, and I also have one that has a full-frame sensor. My favourite lens used to be a 300mm f/4 lens, but I've been using my dad's 300mm f/2.8 lens for the elk rut this year and think it might be my new favourite (it's a little heavy for hiking though!). I sometimes use a teleconverter with my lens, and I almost always use a tripod or monopod to get better pictures.

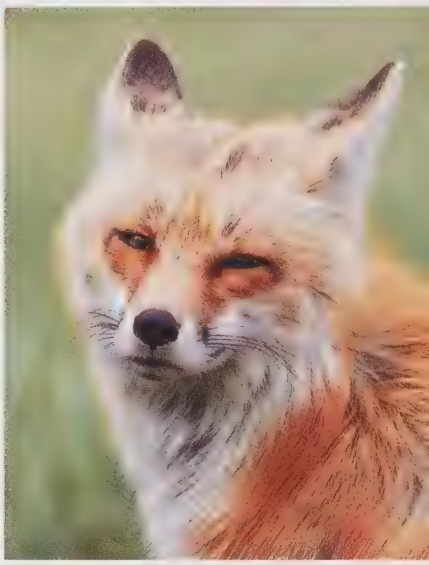
Do you ever find yourself in precarious or even dangerous situations when taking photos?
Well, I take lots of pictures of bears, bull elk, and bighorn rams, so I guess there's always a little danger. My dad has helped me learn how to photograph wildlife safely and not get too close or do anything to make them anxious or upset with me being there. One of the rules we use when we take pictures is "do no harm," so we never put an animal in a bad situation.

What is your favourite place in Canada to photograph, and why?
I have always said Waterton, Alberta because we are there a couple times a week photographing wildlife, but I just spent 10 days in Jasper photographing the elk rut and I think it might be a new favourite! I also really like photographing owls in BC. I'm hoping to photograph moose and caribou in the Yukon one day soon and would love to photograph puffins in the Atlantic Provinces! My dad tells me I need to experience Algonquin too, so I guess I have a lot of places on my list to get to!

What's it like having your photos on the same wall and in the same exhibition as some of the best wildlife photographers in the world?
It's awesome! I can't believe my pictures will be on exhibit in museums around the world! I've met a few of the other awarded photographers online and one in person, and it's really cool to have my pictures shown with theirs. It's definitely a huge honour and I'm really grateful.

What has been your favourite photography moment so far?
It's hard to pick just one, but I think photographing bighorns in Waterton Lakes National Park last spring. My dad and sister and I spotted a group of rams up on one of the slopes and as we started heading up there I noticed a few of the younger rams were getting really active. My dad went up for some of the big rams that were bedded down but my sister and I decided we should photograph the younger ones just in case. I picked a good angle for some pictures and all of the sudden they reared up and crashed together in an awesome headbutt! I had changed my settings to freeze the action just in case they did something and managed to get a shot right as they hit each other. You can even see the hair and dander flying from the impact! That picture ended up winning the 2014 Young Outdoor Photographer of the Year competition, so it's for sure one of my favourites.

Do you expect to become a full-time photographer when you finish school? Or do you have a second career choice?
Yes, I really want nature photography to be my career when I grow up. Well, I wouldn't mind playing for the Calgary Flames in the NHL either, but I think I'll stick with photography! ■



Photographer Josiah Launstein loves taking pictures of wildlife, especially Rocky Mountain Bighorn Sheep, birds, elk, and foxes.

PHOTO CONTEST

ROM WILDLIFE PHOTOGRAPHY OF THE YEAR CONTEST

Enter the ROM's Photographer of the Year contest and win an Arctic expedition for two! Trip includes airfare and is valued at $20,000. Grand prize generously donated by our Presenting Sponsor Quark Expeditions.

HOW TO ENTER
Share your picture with **@ROMtoronto** from your Twitter or Instagram account. Tag your entry with **#ROMwpy**. Make sure your accounts are public. Contest runs until January 31, 2016. Go to **rom.on.ca/wpycontest** for details.*

*Contest is open to residents of Ontario only, 18 and over.

Bird Spotting

EMBRACE THE WINTER THIS SEASON BY SETTING UP BIRD FEEDERS

By **EMILY RONDEL**
Photography by **MARK PECK**

Not many people think of the harsh Canadian winter as a good time to view wildlife, but installing bird feeders in your yard can turn the cold months into an incredible opportunity to observe bird species from the comfort of home. Even the most cold-averse "armchair biologist" can contribute to wildlife research by participating in Project FeederWatch.

Project FeederWatch is a Citizen Science program that tracks broad-scale movements of winter birds and long-term trends in their distribution and abundance. Starting in Ontario in the mid-1970s, the program has grown to include more than 20,000 participants from every American state and Canadian province. The data collected by this army of citizen scientists is invaluable; FeederWatch information paints a detailed picture of weekly bird population fluctuations across the continent. FeederWatch data tell us where birds are, as well as where they're not, allowing scientists to piece together accurate population maps for more than 100 species. This treasure trove of information could not be collected without the volunteers who watch birds in their yards, local parks, and nature centres.

10 MOST REPORTED FEEDERWATCH BIRD SPECIES IN ONTARIO

(WINTER 2014–2015)

BLACK-CAPPED CHICKADEE

NORTHERN CARDINAL

MOURNING DOVE

BLUE JAY

DARK-EYED JUNCO

WHAT WILL I SEE?

Making your backyard bird-friendly can lead to incredible sightings. Remember, winter birds often travel far in search of food, and changes in food sustenance means that species that are scarce one year could be common the next. Due to the roaming habits of winter birds, your yard might host something really unusual, so keep an eye out.

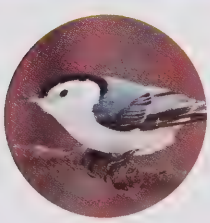
JOIN PROJECT FEEDERWATCH

STEP 1
SET THE STAGE FOR BIRDS
Try "birdscaping" your yard with food plants like black-eyed Susans, sunflowers, crabapples, serviceberries, and sumac. Providing clean water for drinking and bathing is important too.

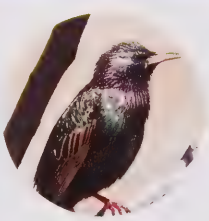
STEP 2
PUT UP A FEEDER
Boost the number of birds in your backyard by setting up bird feeders and keeping them full. Learn which foods are likely to attract different bird species at feederwatch.org.

STEP 3
KEEP YOUR BIRDS SAFE
Birds can become ill from dirty feeders, so be sure to clean them regularly. Provide cover in your yard where birds can hide from predators. Prevent window strikes by breaking up reflections with decals, screens, or awnings. Keep feeders within three feet of a window, or greater than 30 feet away. Most importantly, keep your cats indoors!

STEP 4
SIGN UP FOR PROJECT FEEDERWATCH
You can register for FeederWatch at birdscanada.org/pfw. Registration is $35 and includes a full-colour bird poster and calendar, a FeederWatch handbook, and access to the data entry portal. Registration also includes a subscription to Bird Studies Canada's e-newsletter, quarterly issues of *BirdWatch Canada* magazine, participation in any of Bird Studies Canada's programs, and a charitable tax receipt.


WHITE-BREASTED NUTHATCH

DOWNY WOODPECKER


EUROPEAN STARLING

HAIRY WOODPECKER

AMERICAN GOLDFINCH

EMILY RONDEL is the Toronto Projects Coordinator for Bird Studies Canada. Project FeederWatch is a joint program of Bird Studies Canada and the Cornell Lab of Ornithology. For more information, please visit **birdscanada.org**.
MARK PECK manages the Ornithology collections at the ROM. During his off-hours he photographs live birds.

PAUL KANE'S VENICE

Study Paul Kane's sketches of Venice and find yourself with him on the canals and amid the architecture of one of the world's most romantic cities. Locating the scenes and finding the sculptural details expressed by his pencil will focus intrigue and deepen your desire to explore the city with this guide who did so much to define the early period of Canadian art.

BY **KENNETH R. LISTER**

Struggle over a portage carrying canoe and pack, climb to the crest where the blue water vista opens out, and your response is visceral. This is not an intellectual or philosophical response. Your reaction wells up from the depth of your soul, washing light over darkness. The response is similar to that of stepping to the top of a bridge crossing over the Rio di Santa Caterina. Look west along the canal to beyond the Canale della Misericordia and there before you is the view—steeple, wooden bridge, and water-lapped buildings—that Paul Kane (1810–1871) sketched more than 170 years ago.

Venice was a stop on Paul Kane's 1842 walking tour of Italy. Between Naples and Venice he sketched country scenes, city streetscapes, architecture, fountains, sculptural details, canal scenes, and people. Kane continued to sketch while in the "island-city" and locating the views he sketched is an invitation to follow the streets the artist walked, to view Venice as he observed and experienced it. "The charm of Italy is akin to being in love," it has been written, and here we can visualize the wandering artist sitting on steps and leaning against balustrades, detailing the charms of Venice—his own reverence in silence.

As in love, mystery is the charm of Venice. Its haunting essence, as written by Donna Leon, is the uncertainly beyond the next corner. Perhaps it is also the desire to be in the "noble existence of past epochs" that might be revealed with the turn of a brass handle. A search for Paul Kane's Venice—his views along canals, sketches of architectural details—is to follow the mystery and embrace its fecund emotions. After days of sauntering along the streets of Venice—often down avenues that abruptly end in stone stairs that descend to the dark water—the anticipation builds in the face of potential success, the sunlight on the distant bridge beckoning.

Finding the bridge that Kane stood on to take the sketch was hard won. On a day of rain, frustrated by lack of success, I was walking in the opposite direction when attracted to an etching in the window of a manuscript, map, and print shop. With disbelief, I saw that behind the rain-streaked window hung an etching showing the scene of my search. Blessed with fortune, the proprietor knew the location and within an hour I found myself approaching the steps of Kane's perch. The scene across the Canale della Misericordia is a view that continues down the Rio della Sensa (Fig. 1). The bridge in the middle ground of the sketch spans the canal connecting the Fondementa Misericordia and the Campo de l'Abazia in the eastern half of the Cannaregio district. The steeple is on the roof line of the Scuola Vecchia della Misericordia built in the early 1300s as the headquarters for the confraternity of the Scuola Vecchia della Misericordia.

In the excitement of standing where Kane stood, the low white-faced structure on the south side of the Rio della Sensa also presented a familiar image. Kane had sketched what appeared to be the entrance to a courtyard from a canal (Fig. 2a). Two elaborate iron-grilled windows flanked a central, rounded doorway in front of which were steps leading down into the water. Gargoyles positioned over each window and the door gave the structure an identifiable uniqueness that I hoped would assist identification while passing by in a boat. Earlier, on the water-bus, I travelled both ways on the Grand Canal thinking that Kane may have sketched the entrance to one of the canal's grand palazzos. But on this day, with added excitement, I was anticipating another discovery. I crossed over to the canal side of the Scuola Vecchia della Misericordia and there the subject of Kane's sketch was confirmed (Fig. 2b).

It is not known if Kane gravitated to this area of Cannaregio for the gatherings of artists and writers who patronized its Palazzo gardens. And it is not known why he chose to sketch these particular scenes at the eastern end of the Rio della Sensa. But his sketches show that he followed the path of all Venice visitors and headed toward the Piazza San Marco. A detailed scene of a narrow canal leading toward the side of a church was also an enigma (Fig. 3a). I presented the sketched image to gondoliers, hotel custodians, shop keepers, and street artists. All expressed interest but they led to lost leads. Following one lead to the Basilica dei Frari, a chance meeting with a Professor of Musicology at a nearby archives directed my attention to the Church of Santo Stefano and the Doge's Palace in the San Marco district. →

VENICE, OCTOBER 12, 1786

Architecture rises out of its grave like a ghost from the past, and exhorts me to study its precepts, not in order to practise them or enjoy them as a living truth, but, like the rules of a dead language, in order to revere in silence the noble existence of past epochs which have perished for ever.

—J. W. GOETHE

5

A / SKETCH
Detail of Capital and Cornice
Foscari Arch, fifteenth century
Doge's Palace at the end of the Foscari Portico
San Marco district, Venice, Italy
graphite on paper
21.5 × 13.8 cm
946.14.11

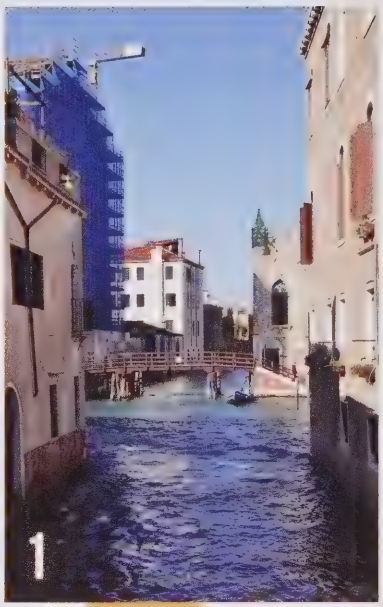
(Opposite)
B / Detail of capital and cornice
Foscari Arch, Doge's Palace
Shooting Location: Doge's Palace courtyard

Walk toward the bridge that crosses over the Rio del Santissimo and you are following Kane's footsteps. There, standing on the Ponte San Maurizio, in a northern view, spreads Kane's composition (Fig. 3b). Architectural features have changed since 1842, but the building that arches over the canal and the long, vertical window and brickwork along the roof line of the church are unmistakable. Following the avenues east through the Campo San Maurizio and along through the Campo San Moise leads to the Piazza San Marco, that ancient sanctuary that Henry James wrote has turned into the "biggest booth" of the Venice bazaar. As you enter the piazza, the Basilica di San Marco, the tall Campanile, and the northwest corner of the Doge's Palace dominate the end of the vista. Here, Kane was attracted to the sculptural details of the Palace. Before the ceremonial entrance (Porta della Carta) at the palace corner, Kane sketched a sculptural group showing the Judgement of Solomon that symbolizes the Palace as the seat of justice (Fig. 4). And in the interior courtyard, he drew details of sculptural elements that are part of the triumphal arch dedicated to Doge Francesco Foscari (Figs. 5 & 6).

Throughout Kane's Italy tour, his sketches show an interest in capturing grand vistas and architecture that document the country, as well as sculptural details that display Italian history and artistry. Interestingly, his Venice sketches do not include the common views—the sweep of the Grand Canal and the Church of Santa Maria della Salute at its entrance, or a view of the Basilica di San Marco with its mosaics and soaring pinnacles. Rather, we see the narrow canals in the depth of the city, their buildings rising from the water. We see the artist honing his pencil skills with studies of sculpture details that portray artisan labour. Here Kane captures the city's haunting essence: slow and sinuous her tensions—shadow and texture, scent and damp—charm and seduce like the allure of a mysterious recluse. ◘

KENNETH LISTER is Assistant Curator of Ethnology in the Department of World Cultures at the ROM.

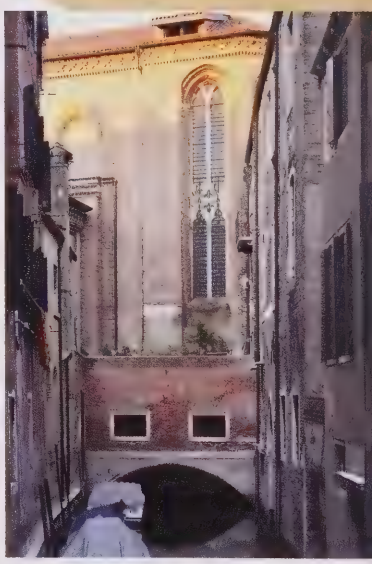
TRACING KANE'S FOOTSTEPS



A / SKETCH
Canal Scene
View across the Canale della Misericordia along the Rio della Sensa
East Cannaregio district, Venice, Italy
August–September 1842
graphite on paper
21.5 × 13.8 cm
946.15.13

B / Rio della Sensa and the Scuola Vecchia della Misericordia
Shooting Location: Ponte Molin de la Racheta
Heading: West Northwest, 297°

3



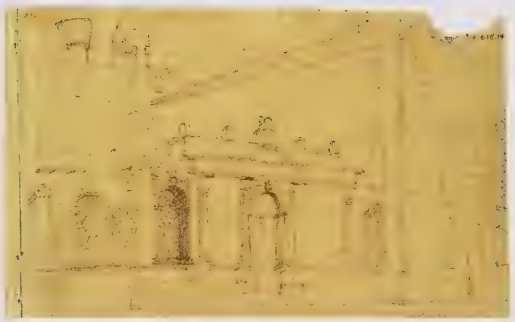
A / SKETCH
Canal Scene
Church of Santo Stefano along the Rio del Santissimo
San Marco district, Venice, Italy
August–September 1842
graphite on paper
21.5 × 13.8 cm
946.15.15

B / Church of Santo Stefano Rio del Santissimo
Shooting Location: Ponte San Maurizio
Heading: North Northeast, 24°

2

A / SKETCH
Entrance to Venice Courtyard
South side of the Rio della Sensa
East Cannaregio district, Venice, Italy
August–September 1842
graphite on paper
21.5 × 13.8 cm
946.15.14

B / Courtyard entrance
Rio della Sensa
Shooting Location: Fondementa de l'Abazia (beside Scuola Vecchia della Misericordia)
Heading: West Southwest, 246°



A / SKETCH
Group of Figures
Judgement of Solomon, fifteenth century
Doge's Palace, near Porta della Carta
San Marco district, Venice, Italy
graphite on paper
21.5 × 13.8 cm
946.14.10

B / Judgement of Solomon
Doge's Palace, near Porta della Carta
Shooting Location: entrance to the Porta della Carta beside the Basilica di San Marco

All sketches are gifts from Raymond A. Willis in memory of his mother, Emmie à Court ("Chelsea"), daughter of Allan Cassels and granddaughter of the Honourable G. W. Allan.

6

A / SKETCH
Balcony
Foscari Arch, fifteenth century
Doge's Palace at the end of the Foscari Portico
San Marco district, Venice, Italy
graphite on paper
21.5 × 13.8 cm
946.14.8

B / Foscari Arch Balcony
Foscari Arch, Doge's Palace
Shooting Location: Loggia (exterior gallery), Doge's Palace

return to SRI LANKA

For decades, civil war isolated this lush tropical paradise from science—now it's ready to be explored anew

By **DEIRDRE LEOWINATA** & **VINCENT LUK**

Opposite page, clockwise from left:
1 Leschenault's rousette (*Rousettus leschenaultii*) hanging in a tree.
2 Burton Lim and crew at Kumana National Park.
3 Lim and Signe Brinklov collecting.
4 Blood vessels in the wing of a lesser short-nosed fruit bat (*Cynopterus brachyotis*).
5 Lim holding a rufous horseshoe bat (*Rhinolophus rouxii*).
6 Brinklov at Thangamale sanctuary.
7 The Knuckles Mountain Range in Sri Lanka.
8 Lim setting up a harp trap.
9 Vials of silica beads to help preserve the DNA samples collected.
10 #ROMSriLanka team poses for a group photo.
11 Scouting for evidence of bats at Kumana National Park.
12 Taking a wing punch biopsy for DNA study of an Indian pipistrelle (*Pipistrellus coromandra*) from the Kandy region.

Serendipity, the word coined by art historian Horace Walpole in the 18th century meaning "fortunate happenstance" or an aptitude for making desirable discoveries by accident, sums up the feelings and experiences of the ROM's Sri Lanka expedition to study bat biodiversity. What you may not know about the word serendipity is that it originates from Serendip, an old Arabic name used for the island of Sri Lanka, recorded in use as early as 361 AD.

Just by looking out of the airplane window onto the green hills and valleys of Sri Lanka, you can tell that it's something special. There's something about the bright colours painted on the mud-brick houses, and the waving hands and smiling faces of passers-by, that is so genuine it makes you feel at home at once.

The most exciting thing about tropical ecosystems in places like Sri Lanka is the sheer amount of life they harbour. Biodiversity at the equator is incomparable to any other region of the world.

CIVIL WAR

On a hot Sri Lankan summer day you would never know that you were in a country still recovering from a generation of turmoil. Sri Lanka's civil war was a clash between the Liberation Tigers of Tamil Eelam (more commonly known as the Tamil Tigers) and the largely Sinhalese government. It started in 1983 after a growing separatist movement in the 1970s resulted in a violent anti-Tamil backlash, and lasted for 26 years (until its end in 2009). The human impact was devastating and the landscape was scarred as government soldiers cleared forests that may have been used for hiding by the Tamil rebels. Biological research in Sri Lanka also suffered during the civil war. The last comprehensive study of the mammalian fauna was published in 1935. Although the fighting meant that parks were less accessible to people, ironically it also created an environment that was less attractive to poachers, allowing for some wildlife to actually flourish.

BRING ON THE BATS

As a country, Sri Lanka is overflowing with attractions, but we were there for a very unique attraction: bats.

Bats don't have the best reputation. They are most often associated with darkness and disease (or a billionaire-turned-superhero). Contrary to popular belief, bats are not close relatives of rodents, and are quite beneficial to us and the world in general. Their own taxonomic order, *Chiroptera*, was named after the Greek words for "hand" and "wing," and they are actually closer to shrews than to humans in the tree of life. They help with pollination and seed dispersal, control insect populations, and can be important bioindicators of climate change.

TEAM OF EXPERTS

Our team of *chiropteran* experts was composed of our fearless leader, bat taxonomist and mammal biologist Dr. Burton Lim; world-renowned bat ecologist Dr. Brock Fenton; and echolocation specialist Dr. Signe Brinklov; →

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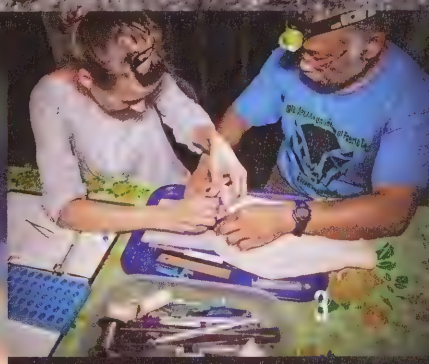
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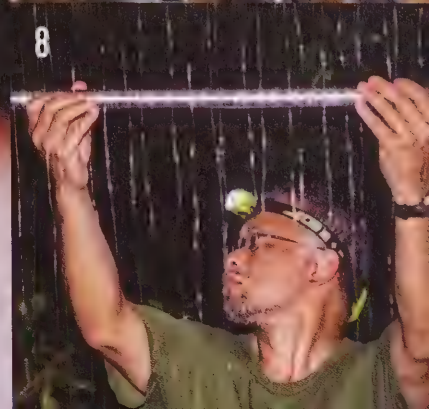
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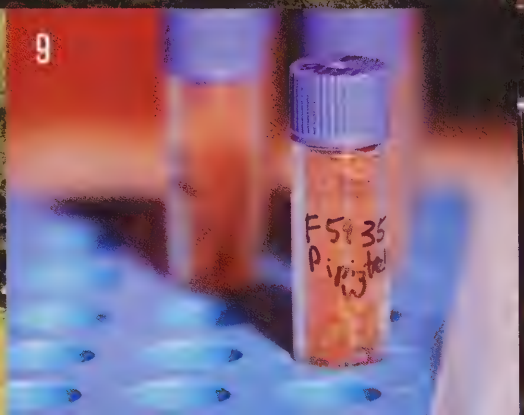
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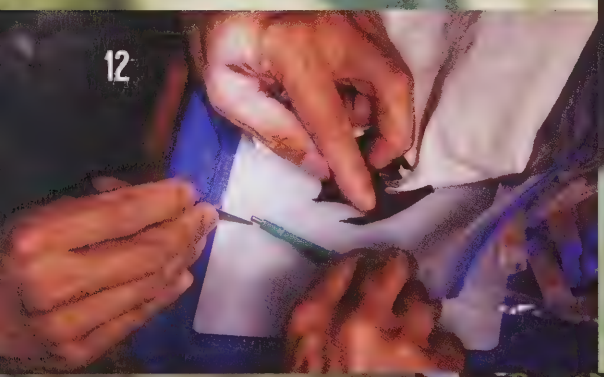
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Rufous Horseshoe bat (*Rhinolophous rouxii*), Round-eared Tube-nosed bat (*Murina cyclotis*) and Old World leaf-nosed bat (*Hipposideros speoris*) in flight.

IT MIGHT BE A NEW SPECIES THAT HASN'T BEEN DESCRIBED BEFORE. WE STILL NEED TO DO SOME WORK AND ANALYSIS BEFORE WE CAN SAY FOR SURE EXACTLY WHAT IT IS.

DR. BURTON LIM,
ASSISTANT CURATOR
MAMMALOGY, ROM

and offering support and sage advice was one of Sri Lanka's most eminent environmentalists, Dr. Sarath Kotagama.

There are eight major families of bats in Sri Lanka: Pteropodidae, Vespertilionidae, Miniopteridae, Molossidae, Emballonuridae, Megadermatidae, Hipposiderodae, and Rhinolophidae. There are 30 known species within these families. During the month we were there, the team caught and identified a total of 16* of those species, including at least one potential discovery that has never been found in Sri Lanka before. Possibly the newest member of Sri Lanka's Pteropodidae family is *Rousettus aegyptiacus,* the Egyptian fruit bat. Originating in Africa, its range was previously thought to extend no further east than Pakistan.

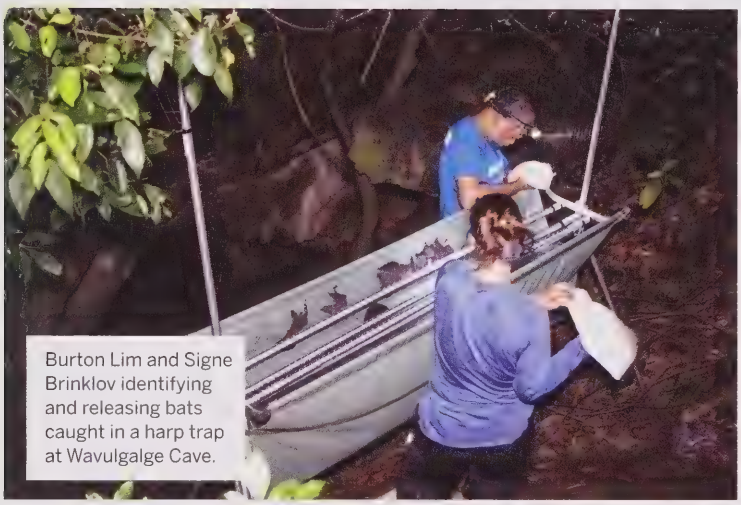
Burton Lim and crew searching for ideal locations for catching bats in the Sinharaja rainforest.

INSIDE THE CAVES

Out of all the exotic places we explored, the caves were by far the most exhilarating, and they were usually a guaranteed place to catch bats. We visited two sites, Nitro Cave in the Knuckles mountain range, and Wavulgalge Cave in the hills of Koslanda. Before you even catch sight of a bat cave, you will know it by the smell. Bats and pinnipeds (seals and walruses) are the only mammals that excrete guano. Birds are the only other animals that produce it, and it's probably a good thing because the smell is overpowering. As we entered the caves, our footprints released clouds of powdery excrement into the air that clogged our senses (even with respirator masks on), and covered each of us in a layer of grey dust. But it's amazing what one can get used to in a short amount of time. Within minutes, the smell was more tolerable, giving us room to appreciate the incredible sights inside.

BATS AND MORE BATS

Inside the bat cave, we found the main chamber and shone our headlamps into the darkness, revealing thousands of yellow gleaming eyes staring right back at us. We were eclipsed by the sound and feeling of beating wings, with the occasional face slap love tap, for the better part of three hours. We were almost overwhelmed by science, literally: The team could not get the bats out of the traps fast enough, to the point where both hands were being used to snatch bats out for a quick species check before releasing them. What we witnessed and experienced in those caves has to be one of the world's most powerful displays of nature. One doesn't normally witness a bat exodus unless one goes looking for it, and for our team of bat experts we did exactly that and were consumed by the majesty of the experience.

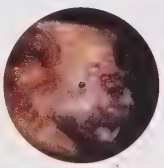


Burton Lim and Signe Brinklov identifying and releasing bats caught in a harp trap at Wavulgalge Cave.

EXPLORATION BEYOND THE CAVES

During the expedition, we surveyed a different area every night, so we were never at one location for very long. We travelled through rolling hills to misty cloud forests, humid rainforests, temperate mountains, and arid deserts all with the hope of finding as many different bat species as possible. On the potholed roads winding around the Knuckles mountain range in northern hill country, we passed few other people. When we rounded a corner it suddenly became apparent why the British gave it the name "Knuckles" as we saw the silhouette of what resembled a clenched fist. We then made our way across the flatlands, following rivers filled with people washing clothes and fishing, passing fields of rice and coconut palms. One day we were sweating in the hot and humid rainforest of Sinharaja Forest Reserve; the next we donned our warmest clothes in Nuwara Eliya situated next to Adam's Peak, the highest mountain in the country; and then we were in the famous arid tabletop mountains of ancient Sigiriya. Every day brought something new and unexpected, and we appreciated every moment of it. ◘

THE FOLLOWING SPECIES WERE CAUGHT AND IDENTIFIED ON THE #ROMSRILANKA EXPEDITION*



1. **INDIAN ROUNDLEAF BAT** *(Hipposideros lankadiva)*
2. **INDIAN PIPISTRELLE** *(Pipistrellus coromandra)*
3. **INDIAN FLYING FOX** *(Pteropus giganteus)*
4. **GREATER SHORT-NOSED FRUIT BAT** *(Cynopterus sphinx)*
5. **ROUND-EARED TUBE-NOSED BAT** *(Murina cyclotis)*
6. **LESSER SHORT-NOSED FRUIT BAT** *(Cynopterus brachyotis)*
7. **RUFOUS HORSESHOE BAT** *(Rhinolophus rouxii)*
8. **SCHNEIDER'S LEAF-NOSED BAT** *(Hipposideros speoris)*
9. **LESCHENAULT'S ROUSETTE** *(Rousettus leschenaultii)*
10. **LEAST PIPISTRELLE** *(Pipistrellus tenuis)*
11. **FULVUS ROUNDLEAF BAT** *(Hipposideros fulvus)*
12. **BLACK-BEARDED TOMB BAT** *(Taphozous melanopogon)*
13. **GREATER FALSE VAMPIRE BAT** *(Megaderma lyra)*
14. **LESSER ASIATIC YELLOW BAT** *(Scotophilus kuhlii)*
15. **EASTERN BENT-WING BAT** *(Miniopterus fuliginosus)*
16. **EGYPTIAN FRUIT BAT** *(Rousettus aegyptiacus)*

*Between August 23 and September 19, 2015

JOIN US FOR

During our expedition, we engaged followers through Twitter, Facebook, and Instagram with the hashtag **#ROMSriLanka** and **#ROMinthefield**. Thank you to everyone who joined us virtually on our expedition! Go to **rom.on.ca** for videos and additional photos from the expedition.

RITUAL. IDENTITY. OBSESSION. ART. TATTOOS

This upcoming exhibition at the ROM explores the culture of tattoos.

By **TAYLOR MIATELLO**

Koruru or parata mask. New Zealand. 19th century.
Carved and engraved wood; white pigment; paua shell.

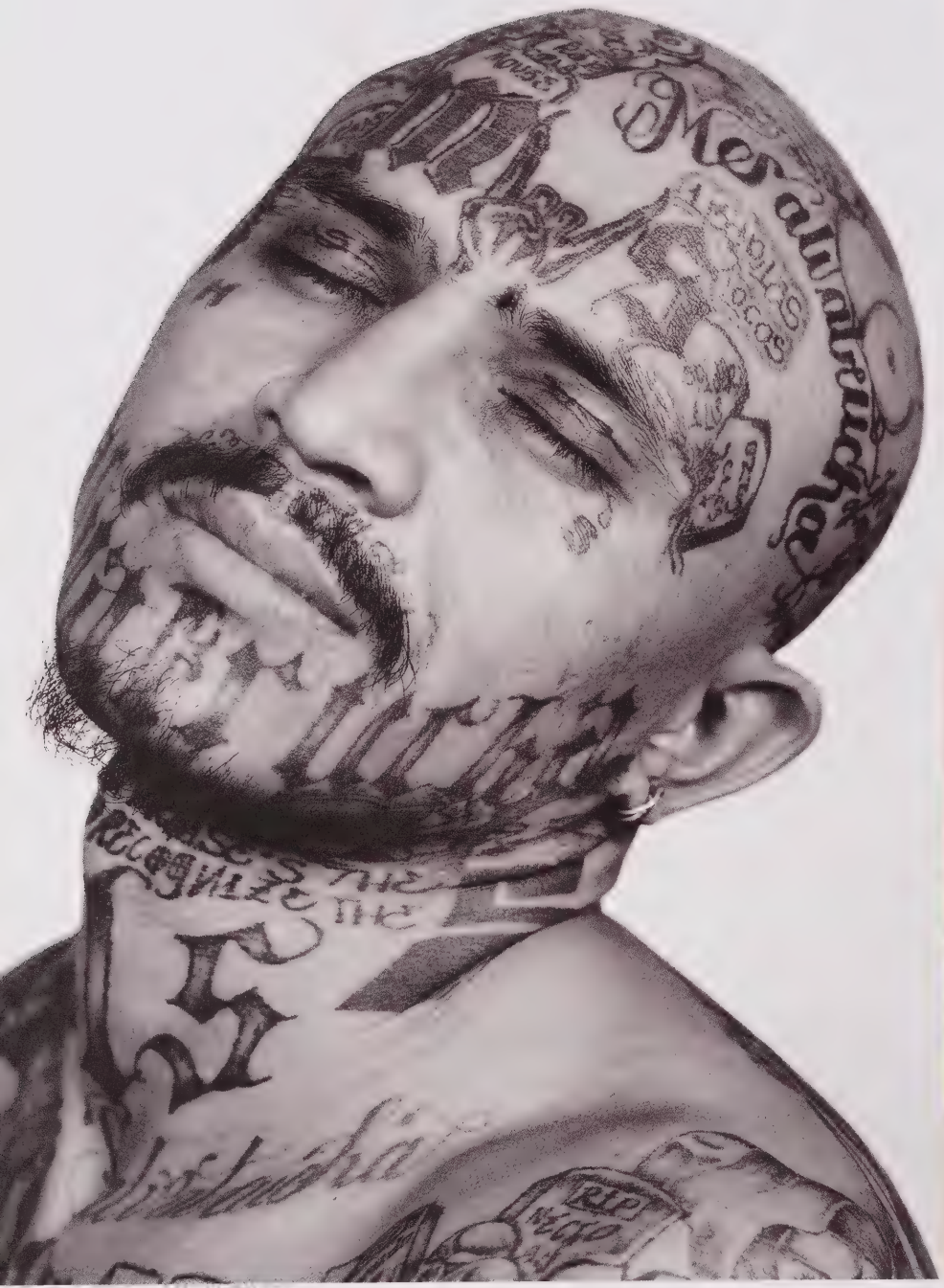
The practice of tattooing has evolved through cultural exchanges around the world, from mainstream groups to those on the fringes of society, from popular culture to subculture trends. You can explore the history and evolution of one of mankind's most ancient art forms in a new exhibition at the ROM, *Tattoos: Ritual. Identity. Obsession. Art.*, opening April 2, 2016.

Tattoos offers a unique approach to understanding ancient practices, histories, meanings, and how the relationship between the tattooed and the tattooist has led to the revival of the global phenomenon of body art.

Coming from the Musée du quai Branly in Paris, where the exhibition received rave reviews and drew record attendance, *Tattoos: Ritual. Identity. Obsession. Art.* journeys into the 5,000-year-old multifaceted world of tattooing. The exhibition showcases a visual history of body art and markings, ancient tools, and one of the first electric tattoo machines, as well as commissioned tattooed body reproductions inked by some of the biggest artists in the contemporary world.

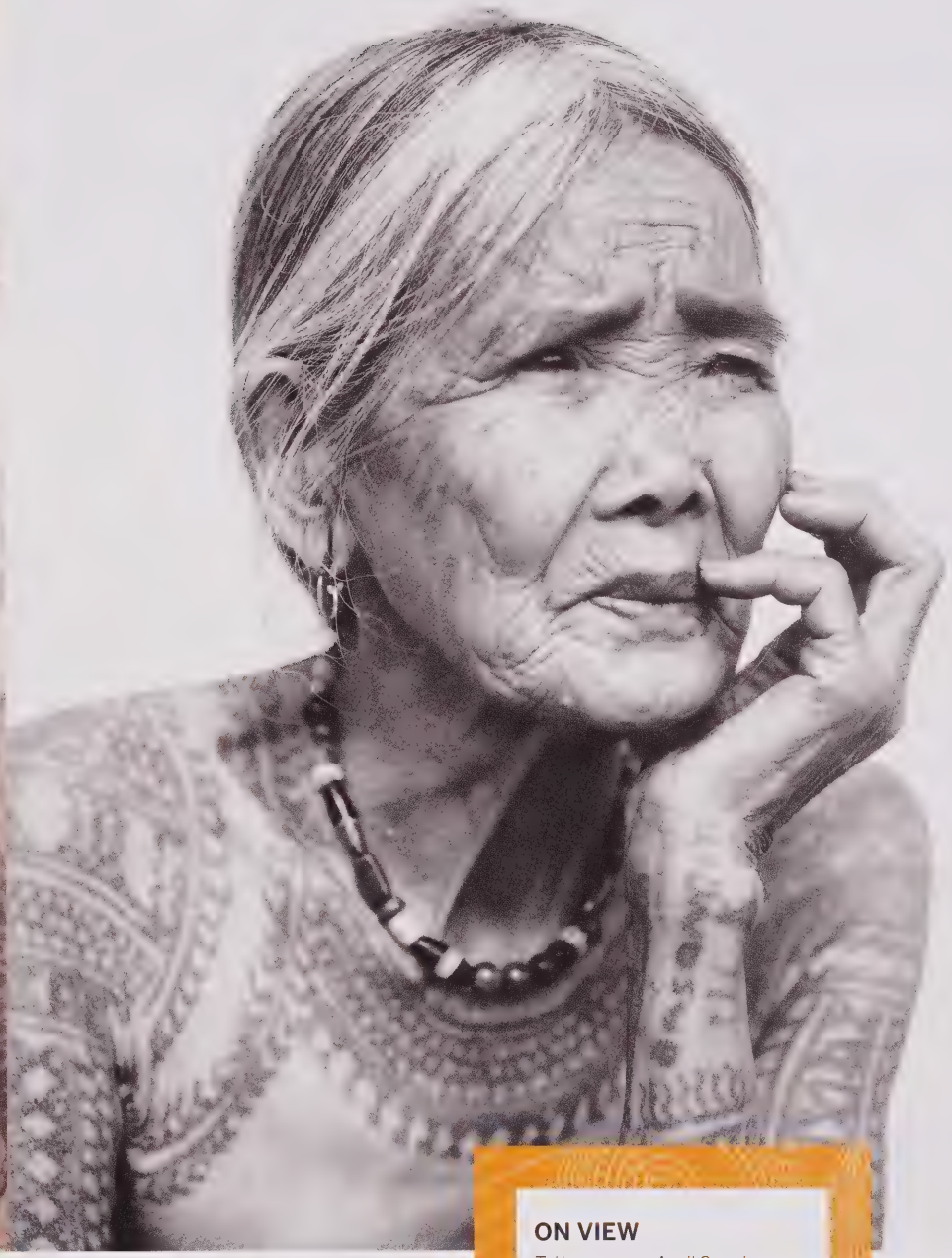
Whether you're a passionate member of the tattoo community, drawn to the history and beauty of body art, or someone who just wants to understand more about the world of tattooing, *Tattoos: Ritual. Identity. Obsession. Art.* is your chance to discover the ink beneath the skin. →

This exhibition was designed and produced by the Musée du quai Branly.



"Portrait of Maras."
Isobel Munoz.
Spain, 2006.

Torso made from an experimental material and tattooed by French tattoo artist Tin-Tin.



"The Last Tattooed Women in Kalinga." Jake Versoza. Philippines, 2012.

ON VIEW

Tattoos opens April 2 and runs until September 5.

Exclusive previews for Members

April 1, 10 a.m. to 6 p.m. and April 2, 10 a.m. to 12 p.m.

Go to **rom.on.ca/tattoos** for more information.

forty years in the SUDAN

ROM archaeologists uncover lost cities and temples on the banks of the middle Nile

By **KRZYSZTOF GRZYMSKI**

THE HARSH CLIMATE PREVALENT IN CENTRAL SUDAN MEANT THAT THE EXPOSED REMAINS SUFFERED BADLY FROM THE SEASONAL RAINS AND FROM THE EROSION CAUSED BY FREQUENT SANDSTORMS.

News reports from the Near East horrify us with stories of the atrocious destruction and looting of ancient sites and monuments in Syria, Iraq, Libya, and other countries in the region. In contrast, little is shared about positive developments – the most prominent being a massive campaign to excavate, restore, and protect the archaeological sites of the Sudan. The Qatari-funded multi-million-dollar project supports many international archaeological and conservation activities aimed at developing the tourist potential of the Sudan, and especially in the areas of Nubia and Central Sudan in the middle reaches of the Nile River. Visitors to the Royal Ontario Museum can see some of the remains of the ancient Sudanese civilizations in our Nubian gallery, one of only a few such galleries in the world. This gallery reflects the ROM's early interest in the ancient cultures of northeast Africa.

The ROM's involvement with ancient Sudan goes back to 1913, when the Museum's founder, Charles T. Currelly, persuaded the Museum's first chair, Sir Edmund Walker, to provide financial support to John Garstang, an archaeologist from the University of Liverpool who was excavating the site of Meroë, located about 200 km north of Sudan's capital, Khartoum. In return, the Museum was given a selection of objects from Garstang's excavation. Neither Currelly nor Walker could have known that nearly a century later the ROM would partner with the University of Khartoum to renew the excavation at this ancient African capital.

But the recent road to Meroë was neither short nor simple. It really began forty years ago, in 1976, when the then curator of the Egyptian and Nubian collection, the late Dr. Nicholas B. Millet, acquired a license from the Sudanese antiquities authorities to conduct an archaeological surface survey around the great bend of the Nile between Fakrinkotti and El Khandaq. Unfortunately, except for a brief tour of the region in his first season, Millet was unable to continue the project and in 1984 passed on his exploration rights to me, then a young and freshly-minted curator. My youthful energy and optimism were needed for carrying out the work in a region that was hit with a series of droughts and famine in the mid-1980s.

OPPOSITE: The moon-like landscape of the Nubian Desert. LEFT: Krzysztof Grzymski and a group of local workmen clear a newly found room in the Amun Temple.

Food and fuel were scarce and our camp was visited by many desperate people looking for work. This archaeological baptism by fire made later work much easier as the situation in the Sudan improved steadily. In fact, the ROM continues its activities there to this day and, thanks to the generosity of the Sudanese authorities, we have been able to enrich our collection of archaeological material from Nubia with many of the objects placed on display in the Galleries of Africa: Nubia.

RECENT DISCOVERIES

In the 1980s and 1990s our research centred on the Lett Basin area, immediately north of Old Dongola, the capital city of the medieval Christian Kingdom of Makuria near the great bend of the Nile where the river returns to its northward course. Among previously unknown archaeological sites were the remains of whole towns and villages buried under the sands of the Nubian Desert, showing that archaeologists can still find lost cities.

After fifteen years of exploring the Letti Basin area, and excavating a medieval site of Hambukol in 1999, at the invitation of the University of Khartoum, we moved our operations to Meroë. Meroë is the most important site in the Sudan and the capital of the ancient Kingdom of Kush, from at least the sixth century BC until the fourth century AD. Although we excavated many parts of the city—ordinary houses, bakeries, and even a palace—our latest research project is being carried out at the Amun Temple at Meroë. →

CLOCKWISE FROM LEFT: A view of a destroyed brick and stone wall; Meroitic graffiti on the stone gate discovered in 2014; one of the rams flanking the entrance to the Amun Temple at Meroë; Sondage exposing red brick foundation of the Amun Temple.

THE REMAINS OF FANCIFULLY DECORATED RAMS WERE FOUND IN GRAVES IN KERMA

UNCOVERING AMUN

Amun, the king of the gods and god of the kings in ancient Egypt, was worshipped in many temples including the famous sanctuaries in Karnak and Luxor. These magnificent temples are known to the millions of tourists who visit Egypt every year. There are, however, many other smaller and lesser-known sanctuaries of Amun built on the banks of the Nile and beyond. At one such temple in the Siwa Oasis near the Libyan border, Alexander the Great paid homage to this Egyptian deity in 333 BC. South of Egypt, in the land that ancient Egyptians called Kush and we now know as Sudan, one can also find numerous Amun temples, some built by the Egyptians and others built by the Kushites. Two places in particular emerged as the most important centres of the cult of Amun in Sudanese Nubia: Napata and Meroë.

While the core of the Amun Temple at Napata was constructed by the Egyptian pharaohs in the 15th century BC, the Meroë temple was built exclusively by the native Kushite kings. John Garstang of the University of Liverpool, the site's first excavator, in 1909–1910, excavated the temple remains in a hurried way without paying attention to the building's history, leaving many parts unexplored. The harsh climate prevalent in Central Sudan meant that the exposed remains suffered badly from the seasonal rains and from the erosion caused by frequent sandstorms. Even in this deteriorated condition the Amun Temple at Meroë is still a major attraction as it is easily accessible by road from Khartoum, although, unlike its more famous counterpart at Karnak, it is visited by only a handful of tourists annually.

DISCOVERED DETAILS

The general layout of the 120 m-long structure is recognizable, and over the course of the last few years the investigations—carried out by the joint archaeological expedition to Meroë, sponsored by the University of Khartoum and the ROM—clarified many aspects of its plan. However, the architectural history of the building is unknown and the structures to the north and south, presumably containing temple magazines, priests' houses, and maybe even a royal residence, have never been excavated. That is why in recent years the Amun Temple has become the main focus of our research at Meroë. The many questions, indeed mysteries, surrounding the history and layout of this temple unwittingly reflect the mysterious nature of the deity itself. The name Amun (Imn in Egyptian) means "the hidden one," and his cult in Egypt is of a relatively late date. It is even debatable whether Amun was a native Egyptian god or whether his cult was brought from the south. The images of Amun depict him usually in human shape, but often as a ram-headed human figure too—the ram being Amun's sacred animal. Interestingly, the remains of fancifully decorated rams were found in graves in Kerma, near the Third Cataract, so it is conceivable that the cult of Amun developed first in Nubia before spreading into Egypt.

STRATEGIC EXCAVATIONS

We began our work by removing the windblown sand that accumulated over the last 100 years, as well as some of the excavation dumps left by Garstang as they obstructed the view of the temple. In the process, we discovered the foundation of the front wall extending from the main gate, or pylon, as well as stairs leading to the top of the wall. We were also able to rebuild part of the wall by means of traditional technique with wall capping made of a mixture of clay and gum arabic to protect it from rain. In anticipation of a grant from the Qatar Museum Authority for the excavation, protection, and, where possible, rebuilding of the temple, our team conducted a thorough clearance of the interior of the temple and carried out trial excavations in selected parts of the building. After all, in order to rebuild and conserve a building, one has to first know its architectural history and exact layout. This paid off handsomely as we found numerous Meroitic inscriptions that Garstang overlooked.

DATING OUR DISCOVERIES

In the northwest corner of the temple, we excavated a small trial trench, exposing the foundations of the building, and collected charcoal samples associated with this lowest construction level. This enabled us to obtain an absolute date of the foundation of the temple—a matter of great importance. In the past, some scholars thought that the Amun Temple at Meroë might belong to the same period as sixth-century BC Amun temples in Upper Nubian sites with similar layouts. Others thought that it was built much later, maybe in the third century BC, the first century BC, or even the first century AD.

Carbon-14 dating of the charcoal samples found near the temple foundation suggested that the Amun Temple at Meroë was founded around 80–10 BC. Of course, this dating is based on only a single sample collected in one corner of the building, so more samples need to be collected to confirm it. Moreover, it is conceivable that an earlier, smaller temple once stood in this place, and so our search for and the study of the lowest strata will continue in the coming seasons. An eminent Hungarian scholar, Professor László Török, suggested that the earliest Amun Temple at Meroë is to be found inside the walled compound, known as the Royal City, some 100 m northwest from "our" temple. We attempted to locate the remains of this purported early Amun temple by means of magnetometric survey, but we failed to find any evidence. It is likely that the remains, if they were indeed there, lie buried too deeply, beyond the reach of our magnetometer. Thus, Török's well-argued hypothesis will have to be tested by means of excavations at some future date.

ABOVE: exposing the stepped-throne base in the coronation room of the Amun Temple; BOTTOM: remains of a Meroitic palace M 750.

In the meantime, our team concentrated its efforts on unearthing all the walls, doors, columns, and other elements of the temple's architecture to publish the first correct plan of a building excavated 105 years ago. We found not only inscriptions missed by Garstang, but also long stairways and whole rooms overlooked in his excavations. To the north of the temple, separated by a 2 m-wide passage, we found a gate made of good-quality sandstone blocks and decorated with graffiti. Where does it lead? This must have been an important building—was it a priest's house or a chapel for another deity? This is the frustrating part of archaeology—sometimes one finds interesting structures, only to run out of the time and money needed to explore them. Even more than curiosity, patience is the main virtue of an archaeologist. We will have to wait until the next field campaign to get our answers. ◘

MORE TO SEE

In the past, the activities of the joint mission of the University of Khartoum and the Royal Ontario Museum were concentrated in an area known as the South Mound, where one of the royal palaces was explored and remains of some of the earliest Kushite buildings, dating to the 10th–8th centuries BC, were found. Part of this story is presented in the videos shown in the ROM's Galleries of Africa: Nubia, as are the views of the Amun Temple.

RETURN OF THE GREAT AUK

The quest to bring species back from extinction

Story and Photography By
OLIVER HADDRATH

It was a grey day with the sky threatening rain as I stood on one of the Farne Islands off the coast of Northumberland, England, surrounded by thousands of birds. An Atlantic puffin flew overhead holding several small fish in its beak to feed the hungry chicks waiting in its burrow. These islands, free of terrestrial predators, are ideal breeding grounds for birds. There were puffins, terns, oystercatchers, murres, razorbills, and many more species. However, the bird that brought me to this place, the great auk, was not here. It hasn't been recorded on these islands since 1760 and the last of its kind has not been seen anywhere since 1844. The great auk (*Pinguinus impennis*) had been the focus of the previous day's meeting in Newcastle where I presented the genetic research carried out at the ROM on this enigmatic bird. The purpose of the gathering of scientists and naturalists was not only to discuss the great auk's unique biology, but also to broach the subject of whether it could or should be brought back from extinction using ancient DNA, genome sequencing, and newly developed gene-editing technologies.

THE LAST OF ITS KIND

The great auk was the last flightless seabird in the northern hemisphere and was found across the North Atlantic from Canada to Europe. It was a large bird with a black back, white belly, and a white patch over each eye. It stood between 70 and 85 cm tall and weighed approximately 5 kg. Historically the great auk has been known by several names. The French called it "apponatz." The English often called it "garefowl" after the Norse name "geirfugl," which means spearbird, a reference to its large, sharp, grooved beak. Another common synonym for the great auk was "penguin." When European explorers ventured into the southern hemisphere and came across similar-looking large flightless seabirds, they proceeded to call them penguins as well—the name we still know them by today.

While penguins and the great auks are alike superficially, they are not closely related at all. The great auk, as its name implies, is an auk and is a close relative of razorbills, murres, and puffins (family name Alcidae). Living auk species range in size from 85 g for the least auklet, to 1 kg for the thick-billed murre. The great auk was by far the largest of the auks and weighed eight times more than its closest relative, the razorbill. →

GREAT AUK STATS

Lived for millions of years in the North Atlantic

They were up to 85 cm tall and 5 kg in weight

They had a diet of fish and possibly crustaceans

Last confirmed great auk encounter was in 1844, where a breeding pair were killed on their nest

John James Audubon, the famous ornithologist and painter, travelled the east coast of Canada in 1833 collecting birds to make detailed illustrations for his book *The Birds of America*. He was unable to find a great auk and later had to purchase a stuffed bird in England which was the model for his famous painting of the great auk. This mount from the ROM's collections is popularly thought to be Audubon's great auk.

AUDUBON'S ILLUSTRATION OF THE GREAT AUKS

Birds are limited in how large or heavy they can become while still maintaining their ability to fly. This poses a problem for aquatic birds who need to dive and swim to catch their food—remaining both small in size and light in weight limits their diving ability and the size of prey they can catch. At some point in the great auk's evolution, the balance began to tip away from flight in favour of life exclusively in the water. They grew much larger, allowing them to pursue larger prey and to presumably dive deeper and remain submerged longer than their other auk relatives. They became more streamlined with their feet moving further back on the body, turning them into a specialized pursuit diver. These traits opened up a new ecological niche for the greak auk, one that was so successful that its population numbered in the hundreds of thousands, if not millions, of birds across the North Atlantic.

The great auk's specialization did not come without its costs. While a superb swimmer likely remaining at sea most of the year, it was still compelled to return to land to breed. Being flightless it could no longer nest on rocky cliffs like other auks, and required a sloping shoreline to come ashore. On land its aquatic adaptations made it slow and clumsy. While these disadvantages did not seem to compromise the great auk's success for most of its history, evolution had not prepared this bird for the rise of a two-legged predator who would turn the tables on this specialized aquatic hunter.

THE HUMAN STAIN

While many seabirds have withstood ongoing hunting pressures from humans, great auks with their limited mobility on land and their large body and egg size became particularly easy and tempting targets for hunters. When Europeans first began crossing the Atlantic to explore North America they encountered islands teeming with great auks. These must have been a welcome sight to sailors who had lived on dried and salted rations for the many weeks of an ocean crossing. Jacques Cartier was the first to accurately map Funk Island off Newfoundland (the largest great auk breeding colony in the Americas). He recorded in his journal in 1534, near the Magdalen Islands, that "we killed about a thousand of those Godetz and Apponatz. We put into our boates so many of those as we pleased, for in lesse than one houre we might have filled thirtie such boates of them." What finally led to their demise in the Americas was the systematic commercial harvesting of great auks for their down and outer feathers. Once killed, their bodies were boiled to loosen the feathers, which would be used for pillows and mattresses.

FROM ENDANGERED TO EXTINCT

By the early 19th century, the greak auk was eradicated from the Americas. The birds persisted almost to the middle of the 19th century in Europe, mostly on islands off Iceland but in ever-decreasing numbers. The last two great auks were killed on their nest on the island of Eldey on July 3, 1844. As is often the case with extinctions, it was not recognized until after several years

of further searching that this would be the last confirmed encounter.

While much has been learned about the great auk through archaeology, historical accounts, and genetics, there is much that we still do not know. Recently, the great auk genome has been sequenced, along with the genome of the razorbill, by Thomas Gilbert at the University of Copenhagen.

To be able to sequence the complete genome of an organism has been one of the great innovations of the last twenty years. The sequencing of the first human genome was completed in 2003 at the cost of three billion dollars and involving thousands of scientists. In the intervening years, sequencing costs have dropped a million fold, allowing genomes of many different species to be sequenced. Having the great auk genome has the potential to answer a large number of questions about the species' biology and evolution. Having it also raises the possibility of one day bringing it back.

This past summer, a group of scientists met at the Centre for Life in Newcastle to discuss de-extinction of the great auk. This meeting was organized by Matt Ridley—an author and a member of the House of Lords. It was an international gathering of scientists whose expertise ranged from great auk natural history, to those specializing in genome sequencing, genetic modification, and law to explore the implications of bringing back this species. Some of the attendees are already involved in de-extinction projects of other species. My role was to present insights learned from DNA work carried out several years ago at the ROM by the late Dr. Allan Baker and I. Our research examined the great auk's evolutionary relationship to other auks, and how genetically diverse they were across their geographic distribution.

TO CLONE OR NOT TO CLONE?

The concept of "cloning" extinct species has been a staple of science fiction for many years. In the discussions held, it was understood that the critical piece needed was the great auk's genome. The problem with recovering its genome is that the DNA is highly fragmented, like a giant jigsaw puzzle that needs to be put together without knowing what the final image looks like. The solution to this is to use the genome of the closely related razorbill as a guide to reassembling the great auk genome.

This is not a perfect solution as a razorbill is not a great auk and pieces unique to the great auk may not map to a razorbill genome. The best that can be achieved is a draft of a genome that is mostly great auk but uses some portions of the razorbill. Once you have the complete blueprint, the next step is to modify a razorbill's DNA to match the sequences of a great auk and place it in a cell. This editing step requires making changes at millions of sites across the genome. While this was logistically implausible just a few years ago, new techniques for specifically altering gene sequences are making this seem more feasible every day.

The possibility of resurrecting extinct creatures has sparked a debate among scientists and the public at large. Arguments have been put forward that de-extinction may lessen restrictions on habitat and species protections if there is the perception that extinctions can be →

The genome of the great auk's closest living relative, the razorbill (bottom left), is being used as a reference to help reassemble the extinct bird's genome. Atlantic puffins (bottom right) are among the many seabird species that still breed on the Farne Islands where great auks once lived.

HOW THEY COMPARE

Great auk eggs were prized trophies in Victorian Britain, and their scarcity increased their value. Around 1900 an egg could command a price of £300, a huge sum of money at the time. Comparing a great auk egg to that of its closest relative, the razorbill, gives a sense of how much larger the great auk was. The Atlantic puffin egg is similar in size to a large chicken egg.

12.8 cm
GREAT AUK

7.2 cm
RAZORBILL

6 cm
ATLANTIC PUFFIN

MATT RIDLEY

Matt Ridley is a journalist, author, and a member of the British House of Lords who recently organized a conference to analyze the consequences of bringing the great auk back from extinction. Here, he discusses with ROM magazine some of the questions surrounding the de-extinction debate.

What criteria should be considered when selecting species for de-extinction?
It's too early to say, but obviously any extinct species whose genome can be sequenced to a high standard is a potential candidate. This means species in cold climates that went extinct comparatively recently are among the best candidates. The great auk has particular significance as the only bird species breeding in Europe to go globally extinct in 500 years.

Much of an animal's behaviour is taught by its parents or other members of its group; how are the first generations of de-extinct species going to be taught skills like hunting?
Some species, such as puffins, are altricial—meaning they stay in the nest and are fed by parents for a long time. Others such as guillemots are precocial, meaning they leave the nest and begin to feed themselves quickly. Historical evidence suggests the great auk was highly precocial. Some bird species never even meet their parents (e.g., cuckoos). But training by foster parents of other species will probably prove necessary in the first generations.

Do you think that de-extinction might become an excuse to not prevent habitat loss and extinction?
No. In this case, the return of great auks would help to pressure North Atlantic governments to ensure that overfishing and pollution are prevented.

Where does de-extinction rank for you as a tool of conservation?
Combating invasive alien species comes first for me. These have been responsible for the great majority of extinctions in recent centuries, especially of island species. They are also responsible for severe depletion of some continental ecosystems. Where I live, the grey squirrel is exterminating the native red squirrel. On Gough Island in the South Atlantic, mice are killing albatrosses. Habitat restoration is also a higher priority than de-extinction. But we can and should try to do all three.

WHERE WERE THEY LAST SEEN?

Fossil remains show that great auks used to range over a much larger geographic area in the distant past. Bones have been found from Florida up the eastern seaboard of North America to Greenland, Iceland, down the eastern side of the Atlantic from Norway to the Netherlands, and down to Morocco. Fossils have even been found in the Mediterranean on the Italian coast.

- Known great auk breeding colonies in historical times
- Locations of great auk fossil remains
- -- Presumed geographic range of the great auk

reversed. It has also been argued that the resources needed for de-extinction may be better served protecting endangered species that are on the brink of extinction. Viewpoints favouring de-extinction range from those simply curious to see a sabre-toothed cat or a woolly mammoth, to others who see this as a means of correcting historical wrongs. The most scientific approach toward de-extinction would be to examine each candidate on a case-by-case basis. It is not defensible to spend large resources on bringing back a species whose ecosystem may no longer exist and has little chance of survival in the modern world. A case could be made to spend resources on bringing back a species whose ecological niche has remained vacant since its extinction and its return may help restore balance or increase the overall robustness of the ecosystem. A suggestion has been made that the return of mammoths to the Arctic would strengthen the grasses upon which they would graze; this in turn may help shield the permafrost from the sun and thereby slow its melting. Perhaps the return of the great auk may offer benefits to its environment, but we currently don't know enough. One benefit of de-extinction research is that the tools being developed can also be applied to species at risk, preventing more species from disappearing.

While technological advancements have moved the field of de-extinction forward faster than anyone would have imagined, the return of the great auk, if it happens, is still many years away. ◘

HAVE YOUR SAY

The ROM collections hold the DNA of a lot of extinct species. Visit **rom.on.ca/deextinction** to let us know which species you would like to see brought back to life.

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ROMTRAVEL

TRAVEL NOVEMBER 5 TO 21, 2016

LAOS, CAMBODIA, AND VIETNAM

Cruise the mighty Mekong River. Discover the awesome Buddhist temples of Angkor Wat on the back of an elephant. Create a traditional Vietnamese meal, make a lantern, paddle a kayak to explore the caves and grottos of Halong Bay. Six UNESCO World Heritage Sites, vibrant markets, delectable regional cuisine, magnificent scenery, rich history and culture—join us on this trip of a lifetime.

COMING UP...

POMPEII & THE GULF OF NAPLES

Visit classical Pompeii and other Roman and Greek sites around the Gulf of Naples. Archaeologist Trinity Jackman will enhance your discovery of the lives of the ancient Romans.

APRIL 16 TO 24, 2016

NEWFOUNDLAND CIRCUMNAVIGATION

Embark with the ROM's Dr. Mark Engstrom on the trip of a lifetime aboard Adventure Canada's Ocean Endeavour.

JUNE 19 TO 29, 2016

ROMWALKS

Look for the purple umbrella at the meeting place!

DISCOVER YOUR CITY

Join fellow Museum Members and see Toronto in a whole new light

INSTRUMENTS AND ARCHITECTURE

Explore architecture with a musical theme as we tour parts of the ROM, The Royal Conservatory of Music, and the Edward Johnson Building of the U of T Faculty of Music, while viewing period instruments. Please note there are some brief walks outside, between buildings, so weather-appropriate outerwear is advisable.

Meeting Place:
ROM Rotunda, Level 1.
Saturday, January 30
1:30 p.m.

HURON STREET

Visit the Gothic Revival Bloor Street United Church to view its Great South Window, a mid-twentieth-century stained glass by Celtic Studio. Then walk down Huron Street to St. Thomas's Church, designed in the Arts-and-Crafts style by renowned Toronto architect Eden Smith, to view examples of stained glass designs, including superb windows by the English Bromsgrove Guild.

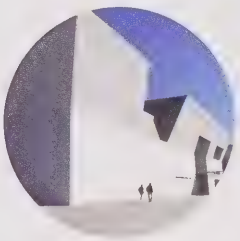
Meeting Place:
Bloor Street United Church, 300 Bloor Street West (at Huron), red doors. Wednesday, February 24 at 1:30 p.m.

TRINITY COLLEGE
(UNIVERSITY OF TORONTO)

Discover carvings by Charles Adamson, Emanuel Hahn, and Jacobine Jones, a heraldic ornament by A. Scott Carter, a 17th-century Flemish tapestry by Abraham van Diepenbeeck, paintings by Sir Edmund Wyly Grier, and glass by Yvonne Williams and E. Liddall Armitage. Visit a unique perpendicular Gothic chapel by Sir Giles Gilbert Scott.

Meeting Place:
Trinity College, 6 Hoskins Avenue, front door. Wednesday, March 30 at 1:30 p.m.

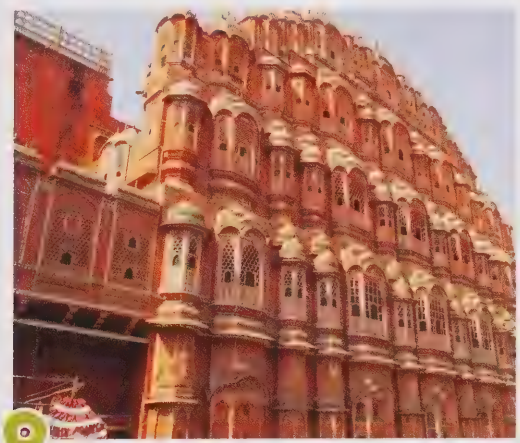
ROMBUS



AGA KHAN MUSEUM
A DAY OF DISCOVERY AT THE AGA KHAN

Take a vacation day this winter and discover the Aga Khan Museum and Ismaili Centre. Join us on January 27, 2016 and start off the day with a lecture followed by lunch at the Diwan restaurant. We then visit the Ismaili Centre and finish off with an architectural and gallery tour of the premises. It proves to be an enjoyable and insightful day at the Aga Khan Museum and Ismaili Centre.

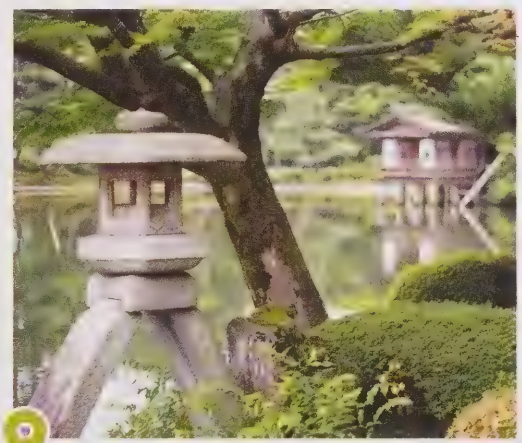
ROM Member ROMwalks are free walks offered exclusively for ROM Members. Registration is required as space is limited. Register at **rom.on.ca/members/events**. Walks last approximately 1.5 to 2 hours.



NORTHERN INDIA

Explore northern India's multifaceted culture, history, and traditions.

FEBRUARY 13 TO MARCH 3, 2017



JAPAN

Medieval, mysterious, and modern, Japan will delight the eye and the palate. The ROM's Jack Howard will reveal the mysteries of Japan.

MARCH 25 TO APRIL 8, 2017

TRAVEL WITH US

For more information on upcoming trips, contact ROMtravel at:

416.586.8034
travel@rom.on.ca
rom.on.ca/travel

PROFILE

The Life of a Designer

THE ROM IS FULL OF INSPIRATIONAL DETAILS FOR SARAH RICHARDSON, CELEBRITY DESIGNER AND LOVER OF HISTORIC ARCHITECTURE.

Sarah Richardson is a designer and the host and co-producer of HGTV's *Sarah's House*, *Sarah 101*, *Room Service*, *Design Inc.*, and *Real Potential*. Her shows air in more than 100 countries around the world.

How often do you visit the ROM?
I visit several times a year, although that's not enough, but sometimes my work interferes with my cultural pursuits!

What inspired your first visit to the ROM?
When we were kids my dad often took us to the Museum on weekend outings.

If you could bring one person to visit the ROM with you, who would it be?
I think the best people to visit with are little kids. Nothing is better than witnessing the awe and excitement they experience. If our girls could pick, they might invite Curious George to join as we've read about his adventures at the museum many times.

Do your kids have a favourite place to visit at the ROM?
It would definitely be a toss-up between the Bat Cave and the Dinosaur Gallery. I have a great video of them giggling and playing at the ROM and that's a guarantee for every visit.

As a designer, are there any parts of the physical space or architecture at the ROM that you are drawn to?
I'm a bit sentimental and love the old parts of the building. As a kid I loved the feeling of climbing the stone steps to the Rotunda entrance, and as an adult, I still marvel at the mosaic details in the Rotunda ceiling. I also appreciate the elegance of the polished-brass handrails. It's the little things I admire about the historic architecture.

If you had to choose a ROM gallery to inspire a design theme, which type of theme would it be?
Who could say no to a little bit of Pompeii!

What word can be used to describe your experience at the ROM?
Humbling.

Have you ever incorporated artifacts into a room or home design?
Yes, I incorporate architectural salvage and reclaimed elements whenever possible. I think treasures from the past bring soul to contemporary homes.

In your travels, what are some of your favourite galleries or museums?
I've experienced galleries big and small in many international destinations, but the standouts remain experiences from when I was younger... seeing a Matisse show at MoMA in New York City, and being completely mesmerized by the beauty of Versailles, outside of Paris, both more than two decades ago. Remembering how inspired you felt at the moment you first saw something is a powerful reflection to recall.

If you weren't a designer, is there another profession you might choose instead?
As a child I wanted to be a graphic designer or a chef. In my new book, I got to play at both, so I'm living all my dreams!

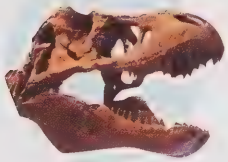
If you were to plan a perfect day out with your husband, what would you plan to do before and after your time spent at the ROM?
That would be a treat! Lunch in the garden at The York Club (a grand Richardsonian Romanesque mansion adjacent to the university grounds, near the ROM, with a wonderful walled courtyard), a leisurely stroll along Bloor Street, a visit to the ROM followed by lazy window shopping (and some real damage perhaps), and then a glass of bubbles on the roof at the Park Hyatt (maybe with a brief detour to the spa at the Hazelton to ease those tired sightseeing muscles).

Note to self: Prioritize actually making a day like this happen soon!

Is there a special experience you've had at the ROM that we haven't asked about?
We often attend fundraising events at the ROM, such as CANFAR, and Bloor Street Entertains, as well as other events. At one event I happened to be the lucky raffle-ticket buyer who took home a stunning Royal de Versailles bracelet, so ever since, I've considered the ROM to be a place where good things happen (usually you visit museums to see diamonds, you don't get to go home with them...but I did!).

What advice would you give to someone who has never visited the ROM before?
Start early, take your time, and realize one visit won't be enough. ◘

SARAH'S MUST-SEES



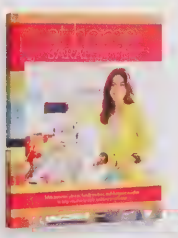
TEMERTY DINOSAUR GALLERIES

POMPEII

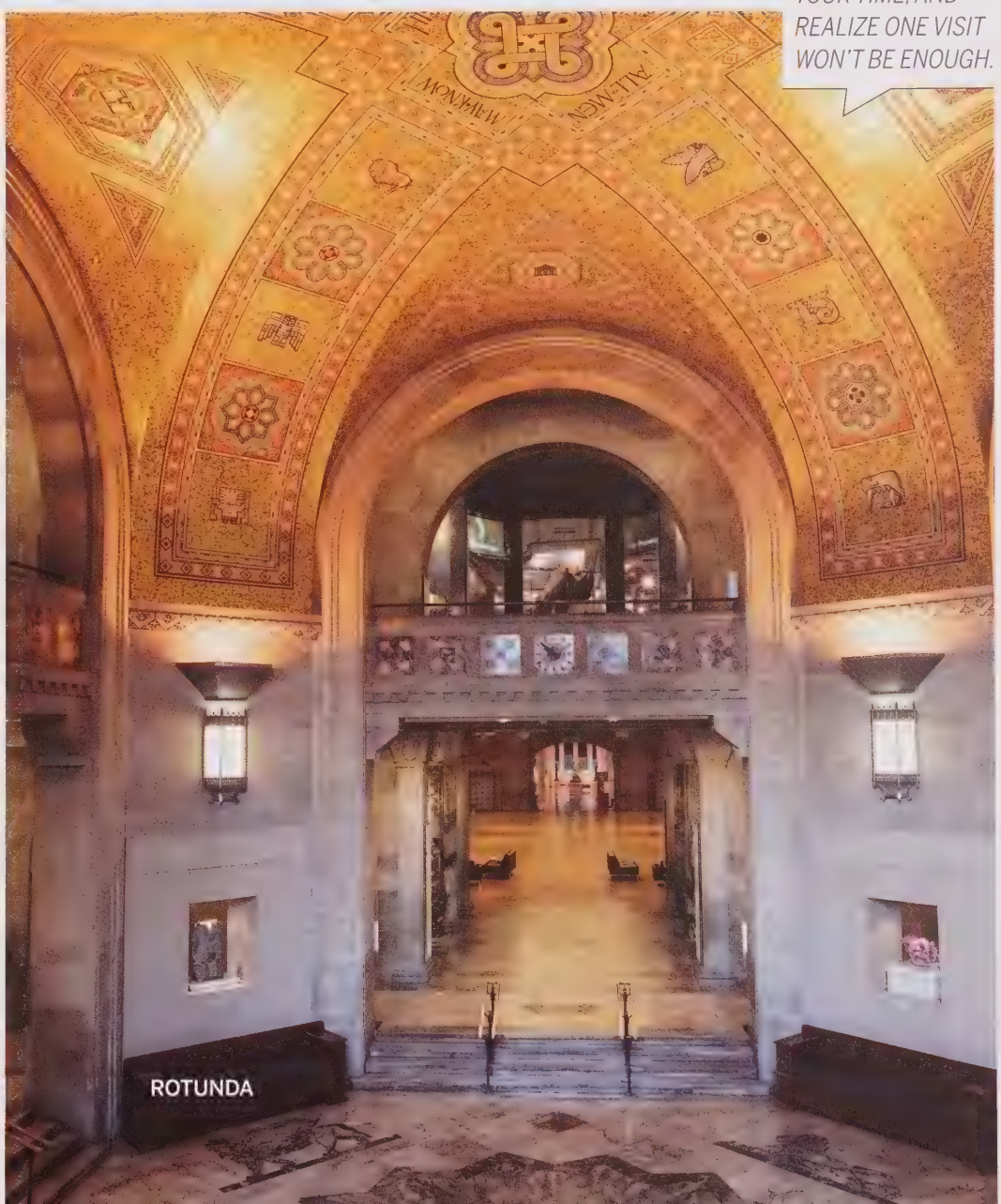
On now until January 3, 2016

BAT CAVE

In her new book, *At Home: Sarah Style*, designer Sarah Richardson guides readers through a variety of houses that showcase her signature style of casual elegance. The book also includes forty-five of Sarah's beloved recipes. *At Home: Sarah Style* is the ultimate guide to design, loving your home, and entertaining.



START EARLY, TAKE YOUR TIME, AND REALIZE ONE VISIT WON'T BE ENOUGH.



WARM AND COZY

Upcycled fur, transformed and ready for a Canadian winter at the ROM boutique

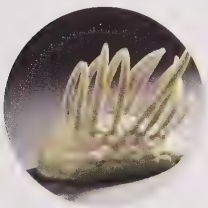
Harricana, the Quebec-based label created by designer Mariouche Gagné, recently made its debut at the ROM Boutique. Gagné's gorgeous designs are recycled fur and leather transformed into unique pieces. Sustainable and stylish, they're perfect for keeping you cozy and on-trend this winter! Gagné can also make custom designs from your old fur coats and stolls. Go to harricana.qc.ca for details.

1. Wolf **Cushion**, 17" × 17", Raccoon and Hemp, $225 **2.** Upcycled **Earmuffs**, Raccoon, $90 **3.** Mink and Silver **Necklace**, $280 **4.** Men's Crossed Raccoon **Scarf**, $329 **5.** Women's Wool and Fur **Mittens**, $140 **6.** Nassak Trapper **Hat**, Racoon and Leather, $279 **7.** Women's **Cuff** (set of two), Silver Fox, $149

rom governors

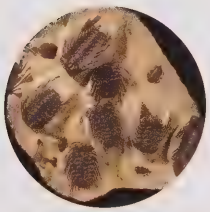
creating the next century together

DAWN OF LIFE GALLERY



WIWAXIA MODEL

ANGISTORHINUS



SELENOPELTIS

SNEAK A PEEK AT THE PAST

Preview the Dawn of Life Gallery

Thanks to your generous contributions to date, our new Dawn of Life Gallery preview space is now open to the public on the Museum's second floor. This tantalizing exhibit offers a glimpse of the history of life on Earth before the dinosaurs, and how our planet has changed drastically over time.

Some of the spectacular fossils on display have been in the ROM's vaults for decades, while others were acquired specifically for the new gallery. Through these specimens, interactive videos, and photos, visitors gain a uniquely Canadian perspective on our earliest beginnings. If you haven't yet seen the space, I urge you to visit with your family and friends this winter. Fundraising continues for the extraordinary Dawn of Life Gallery, which will be a permanent home to the ROM's world-renowned collection of Burgess Shale specimens, and showcase many more spectacular fossils from across Canada. You can help shape this gallery and be a part of this remarkable story! Show your support and make a donation today at **rom.on.ca/dawnoflife** or call me at **416.586.8055**.

Susan

SUSAN HORVATH
PRESIDENT & CEO
RPC FELLOW

A CENTENNIAL LEGACY

To recognize donors who generously supported the Love the ROM Campaign, and to celebrate memories made at the Museum, we have published an archival Love the ROM memory book featuring the many reasons you love the ROM. You can see it on display in the ROM's Main Library from December 1 to January 31 or download your own personal copy on iTunes, Google Play and Amazon. Visit **rom.on.ca/lovetherom** for more information.

CONGRATULATIONS!

The ROM proudly congratulates Hatch for receiving this year's Outstanding Corporation Award at the Association of Fundraising Professionals (AFP) Philanthropy Awards on November 25, 2015. Hatch's remarkable commitment of $3 million to the ROM in 2014 is an investment in education and learning that will be felt for generations to come.

GET IN TOUCH

416.586.8055
susanh@rom.on.ca
rom.on.ca/support
@SusanH_ROM

Illuminating the Power and Beauty of Indian Textiles

FINDING NEW MEANING IN THE CULTURAL THREADS THAT BIND US

Inspired by a passionate ROM volunteer, the new IARTS Textiles of India Fund will celebrate the splendour and influence of Indian textile arts in perpetuity. The Fund was created in honour of Arti Chandaria (1960–2015), whose first love was textiles—each one she wore had a story. Born in Bombay, Arti was first moved by her father's textile export business. As a new Canadian, she galvanized the community to raise $3 million to establish the Curatorship of South Asian Visual Culture, the Sir Christopher Ondaatje South Asian Gallery, and to fund new acquisitions.

Awarded every other year, this grant will enable an emerging artist, a graduate student, an educator, a scholar, or simply a textiles enthusiast to further the preservation, documentation, understanding or revival of Indian textile arts. The grant incorporates a public engagement component, shaped by the recipient, such as a lecture, website, or performance, in order to share new insights with a wider audience.

"The IARTS Textiles of India Fund can be used anywhere in the world toward a project that enhances our knowledge of Indian textiles," says Deepali Dewan, Deputy Head, ROM World Cultures and Senior Curator, South Asian Visual Arts & Culture. "We are so grateful to be able to foster cultural understanding and institutional collaboration while engaging the global community in the appreciation of this art form."

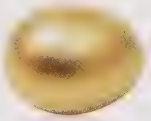
Not only aesthetically pleasing, textiles offer new and surprising ways of understanding our world and its evolving cultures. "These vibrant and colourful fabrics hold memories, speak to future possibilities, and deserve to be shared," says Dr. Sarah Fee, ROM Curator, Eastern Hemisphere Textiles & Fashion. "This award will be a great benefit not only to the Toronto arts community, but also to the larger South Asian art history field."

We invite you to further enhance this fund by making a contribution. To support this grant, please contact Katie McMillan at **katiem@rom.on.ca** or **416.586.5582**.

KEITH THOMSON

Estate Planning 101

LEARN HOW YOU CAN LEAVE A LEGACY AT THE ROM



Keith Thomson is an internationally recognized financial educator, author, and consultant, specializing in estate and charitable tax planning. We recently sat down with Keith to talk about how charitable gift planning can help families become better stewards of their wealth, reduce or eliminate taxes, and leave a lasting legacy.

What's the state of charitable gift planning in Canada?
Canadians are a very generous people. Each year, about $9 billion is donated to charitable organizations across the country. One of the ways Canadians can support their favourite causes while minimizing tax liability is a bequest— a charitable gift typically made through someone's will. Yet despite the potential tax benefits that accrue from careful gift planning, less than half of Canadians have a will, and of those people, only 8 percent include a planned gift to a charity.

These numbers seem surprising. What are the barriers that keep Canadians away from this type of giving?
There are a number of reasons. The decision to make a bequest is deeply personal, and estate planning is an issue that many Canadians feel uncomfortable talking about. Also, the process can seem intimidating for many.

Is there a simpler way of leaving a legacy?
There's one approach that I call the "60 Second Bequest," where a charity can quickly be added as a beneficiary to your Registered Retirement Savings Plan (RRSP) or your Registered Retirement Income Fund (RRIF). The bequest bypasses you and provides tax relief against any taxes owing on the registered plan. It's a fast, discreet way for people who want to make a planned gift, with absolutely no cost to the individual.

What's involved in a 60 Second Bequest?
It's something that can be done in as few as three simple steps:

→ Request an RRSP/ RRIF Multiple Beneficiary Designation form from your plan administrator, or download one directly at philanthropymatters.ca

→ Select one or more charities you would like to include as a beneficiary

→ Send the completed form to your plan administrator

Do you have any advice for people considering making this or any other type of planned gift?
Talk with your family. It's important that everyone understands your wishes and what matters to you. Also, involve the charities. It's a great way of deepening your relationship with the organization, and to learn more about the impact your gift will create.

SAVE THE DATE

Attend a complimentary Estate Planning Presentation with Keith Thomson at the ROM!

Thursday, February 4
3:00 p.m.

Seats are limited.

Please contact Janice Correa at **416-586-5578** or **janicec@rom.on.ca** to reserve your spot today!

School Visits Open Up a World of Wonder

PARTNERS ENABLE CHILDREN TO VISIT THE ROM

Established in 2006, the School Visits Bursary Program has enabled more than 137,225 students and educators to visit the Museum. This unique experience puts learning into the child's hands, inviting them to handle real objects and artifacts, and to engage with passionate experts.

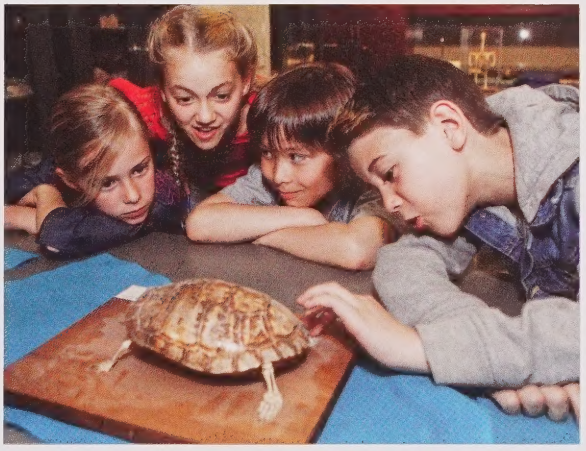
"There's nothing quite like the thrill of donning medieval armour, holding a rare meteorite in your hands, or braving the ROM's infamous Bat Cave," says Linda Seymour, Executive Vice President and Head of Commercial Banking, HSBC Bank Canada. "We want to help young people reach their full potential, and so we're delighted to support the School Visits Bursary Program and the fantastic learning opportunities it creates for youth."

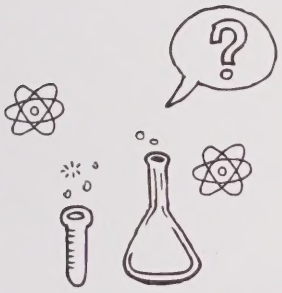
As a founding partner of the Program, HSBC Bank Canada's early support galvanized the corporate community to bring more schools to the Museum. The ROM is proud to recognize Goldman Sachs Canada for coming on board as a new sponsor.

"A visit to the ROM can be transformative for a child," says Peter Enns, Chairman and Chief Executive Officer of Goldman Sachs Canada. "Students can learn about ancient cultures through Cleopatra, understand natural disasters by visiting *Pompeii*, and emerge with a brand new understanding of our world." ◘

"I CAN STILL REMEMBER SEEING DINOSAUR SKELETONS FOR THE FIRST TIME WHEN I VISITED THE ROM AS A CHILD. THIS EXPERIENCE IGNITED MY CURIOSITY AND SPARKED A LIFE-LONG PASSION FOR SCIENCE."

DR. DAVID EVANS,
JAMES AND LOUISE TEMERTY ENDOWED CHAIR, VERTEBRATE PALAEONTOLOGY



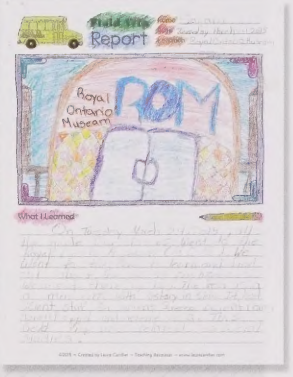


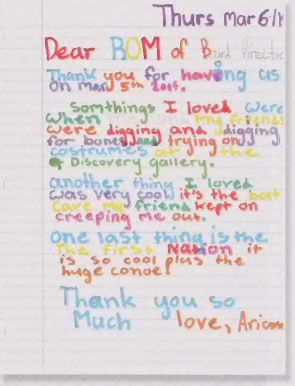
A visit to the ROM can shape the person a child becomes and the impact they have on their community. An increasing body of evidence underscores the correlation between early and active engagement in arts and culture and increased health and well-being, academic performance, vocational attainment, social inclusion, and civic participation.

Ada Slaight and Linamar are among the generous individuals and corporate partners that help make The School Visits Bursary Program possible at the ROM.

THANK YOU!

17,025 students visited the ROM free of charge during the 2014–2015 school year, thanks to the ROM's generous corporate partners.





HELP SUPPORT

To learn how you can support the ROM's School Visits Bursary Program, please contact Naira Pemberton at **nairap@rom.on.ca** or **416.586.5736**.

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"I never did learn to twist, but my curiosity about *the greatest dancer of all time* was definitely aroused... Shiva could teach Chubby Checker a thing or two about moving his pelvis."

—**DEEPA MEHTA**, DIRECTOR

See more ROM objects in the award-winning book *Every Object Has a Story*. Members price $26.95. Visit the ROM Boutique or go to **shop.rom.on.ca** to purchase.

STANDS OVER THREE FEET TALL!

SCULPTURE OF THE HINDU GOD SHIVA, IN HIS MANIFESTATION OF LORD OF DANCE (NATARAJA)

With raised leg and steadfast gaze, Shiva is presented as seductive and powerful. In an era of corruption, Shiva destroys the world through the force of his divine dance, so that it can be born anew.

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rom.on.ca/giftsofwonder

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